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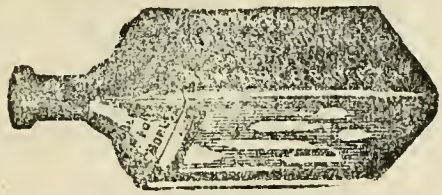
COMPOUND  IODINISED

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FORMULA.—Every *fluid drachm* contains 15 grs. EACH of pure Brom.-Potas. and *purified* Chloral, and ⅛ gr. EACH of *gen. imp. ext.* Cannabis-Ind. and Hyoscyam.

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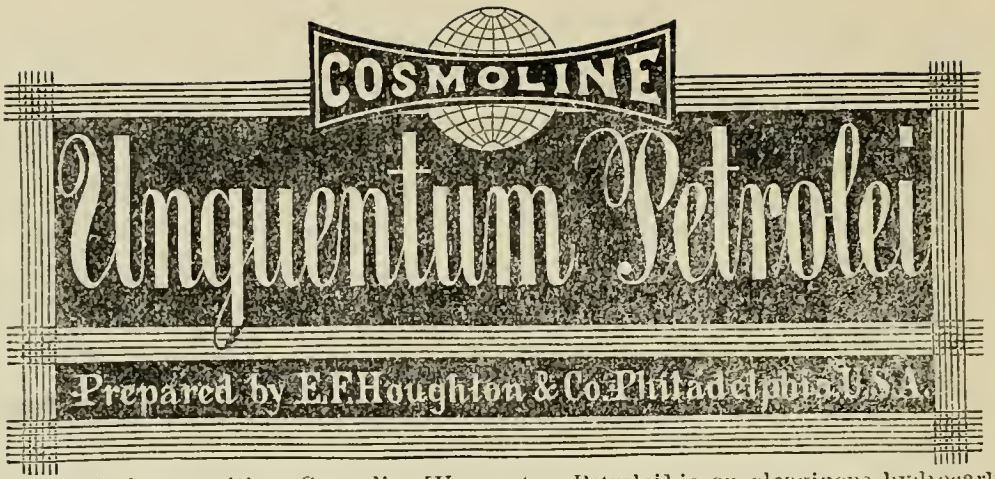

In chemical composition, Cosmoline [Unguentum Petrolei] is an oleaginous hydrocarbon, corresponding to the heavy petroleum oils, and containing a large amount of the paraffines and olefines of the formulæ $C_{16}H_{34}$ and $C_{16}H_{32}$. It contains but a small percentage of the paraffines and olefines, corresponding to the formulæ C_7H_{16} and C_7H_{14}, respectively, and the offensive and irritating properties of the crude oil have been carefully removed. In the process of purification, no acids, alkalies, or other chemicals are employed, and no injurious additions of any kind are made to the natural product. The result is a semi-solid, translucent substance, with a faint odor, an unctuous feel and a slightly tarry taste.

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J. S. B. ALLEYNE.

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The great value of MALTINE in all wasting diseases, and especially in Pulmonary affections, is becoming more and more apparent to the Medical profession.

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Any Physician who will test MALTINE, Plain, in comparison with Cod Liver Oil, in a case of Pulmonary Phthisis, will find that it will increase weight and build up the system far more rapidly. There are, however, many cases when the compounds with Hypophosphites, Phosphates, Peptones, Malto-Yerbine, and Pepsin and Pancreatine are strongly indicated.

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123 *Lansdowne Road, Notting Hill, W., London, October 16th*, 1880.

I have used MALTINE with Cod Liver Oil with the happiest results in a case of tuberculosis attended with tubercular peritonitis, in which the temperature of the patient rose to 105 1-5° and persistently remained above 100° for upwards of two months. The only medicine taken was MALTINE with Cod Liver Oil, and an occasional dose of Carbonate of Bismuth, to check diarrhœa. She gradually improved and made a perfect recovery. I find MALTINE with Cod Liver Oil is more readily taken and more easily assimilated than Cod Liver Oil in any other form.

EDMUND NASH, M. D.

The Beeches, Northwold, July 28th, 1879.

I find that my patients can readily digest your MALTINE with Cod Liver Oil without causing any unpleasant after-feeling. I have full confidence in the virtue it possesses to sustain the system during prolonged diseases of a tubercular or atrophic nature.

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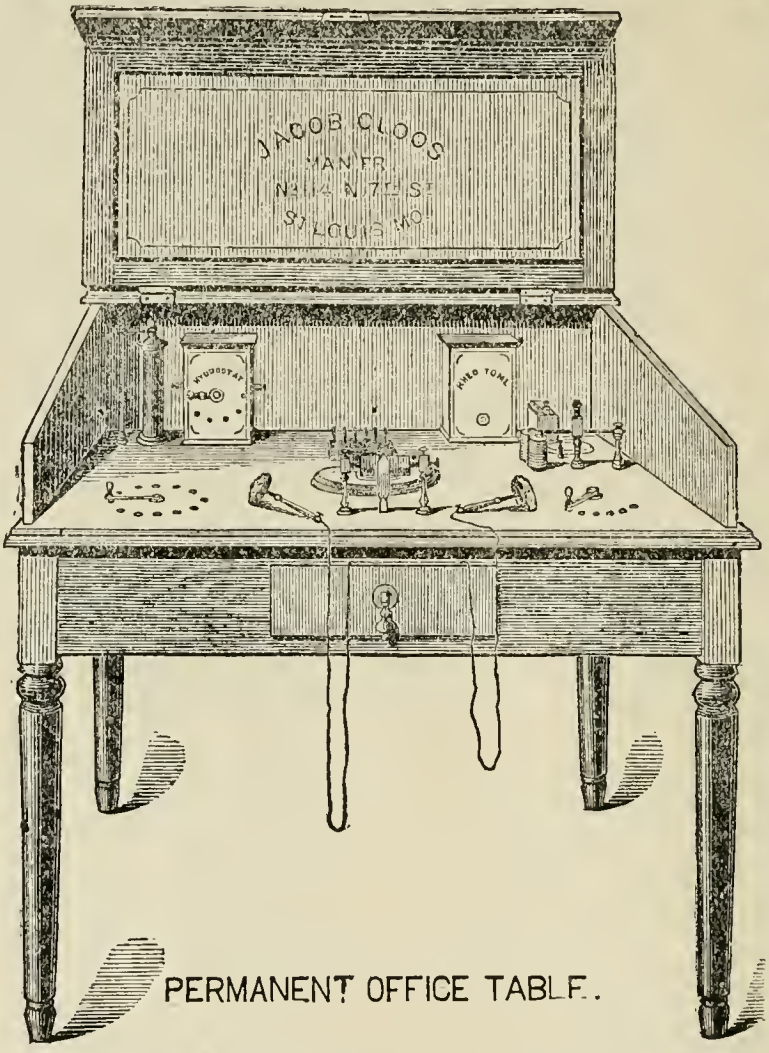

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THE ST. LOUIS COLLEGE OF PHYSICIANS AND SURGEONS,
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Respectfully yours, LOUIS BAUER, M. D.

OPINION OF J. K. BAUDUY, M. D.

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"The Trommer Company has hitherto taken the lead in the introduction of the Extract of Malt. The uniformity and reliable character of this Extract has induced an enormous demand and sale, so that we presume there is scarcely a drug-house on the continent that does not supply it"—"Obstetric Gazette," Cincinnati.

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THE

SAINT LOUIS

MEDICAL AND SURGICAL

Journal.

VOL. XL — FEBRUARY 1881 — No. 2.

Original Contributions.

ARTICLE VII.

BRONCHOTOMY AND ITS AFTER TREATMENT.

By JOHN W. TRADER, M. D., Sedalia, Mo.

Just at this time we are flooded with literature relating to the air passages and operations upon the wind-pipe. We take a few moments' leisure to review this subject, not that we have anything new to offer, as to the mode of procedure in surgical operations upon the bronchiæ or trachea, but believe that we can improve somewhat upon the mode of general treatment. In the first place, as regards the operation of tracheotomy, I thought we might be able to invent some method of keeping the incision open without the introduction of so large a body as the tracheal tube. But it seems that every device, almost, has been used for this purpose, and that the double canulated silver tube has arrived at its present status by a system of evolution, and deservedly occupies the place accorded to it by the right of the "Survival of the fittest." It is hard to tell just how far back we may date the introduction of this operation to the profession of medicine.

Galen says Asclepiades first introduced Bronchotomy, but left us without any description as regards the character of his operation. Hippocrates evidently never performed the operation; yet, in speaking of inflammation of the throat, when suffocation is about to supervene, he recommends *fistula in fauces ad maxillas intrudenda qua spiritus in pulmones trahatur.* "No doubt," says Dr. Samuel Cooper, from whom the above is taken, "he would have advised more, had it not been for the doctrine of his time, that wounds of cartilages were incurable." Some of the older physicians contended that the operation of opening the windpipe was fabulous and that it was not possible to do it without fatal results, and as even the reputed author of the operation had left no instructions how to perform it or what the results were, it was but reasonable to doubt and condemn the procedure altogether. Later, however, we have quite a clear and succinct account of how the operation was performed by Paulus Ægineta. "We must," says this author, "make the incision in the trachea, under the larynx, about the third or fourth ring. This situation is the most eligible, because it is not covered by any muscles, and no vessels are near it. The patient's head must be kept back, in order that the trachea may project more forwards. A transverse cut is to be made between two of the rings, so as not to wound the cartilage, only the membrane."

No artificial aid was called in, aside from the position of the head, to keep the wound open. After operators ventured upon division of the cartilages, various suggestions were made looking to the patency of the opening. Some advised cutting out a circular piece of the trachea—and before the days of the silver wire, waxed ligatures were introduced upon either side of the incisions and brought behind the neck and tied. Later the straight tube was used, but on account of its frequent clogging was soon abandoned. Some ingenious person in Edinburgh, a long time ago, suggested the introduction of the second canula into the first; and later the curved double canula was adopted and is about universally used at the present day.

The idea suggested by Dr. Martin, of Boston, and reported in the proceedings of the American Medical Association, 1878—of keeping the incision open by wire suture—is not new, but, on the contrary, has been tried by numerous surgeons without success. I can see many objections to this procedure that might

not be apparent upon casual observation. The gradual oozing from capillary hemorrhage would keep up a constant cough as the blood trickled down into the bronchia, and no doubt hasten the formation of new plastic deposit. Moreover, blood contamination would be as likely to occur from the use of the suture as without it; and, again, the vexatious task of constant watching upon the part of the surgeon, in order to keep things from tearing down. It is no use telling the nurse what to do or *how* to do it, if anything happens the doctor is summoned at once, and this is not altogether pleasant, particularly should he have any other patients to look after.

In regard to the demand for the operation, we are more decided in its recommendation than were the fathers of medicine.

For the removal of foreign bodies—or in cases of mechanical obstructions, or purely spasmodic disorder of glottidian and epiglottidian muscles—when suffocation is imminent—there should be no hesitancy in opening the wind pipe.

Some have doubted — and eminent surgeons of this age contend—that in cases of plastic deposits, such as occur in diphtheritic laryngitis, no benefit aside from a temporary relief is likely to take place.

The operations in this country, taken altogether, have been generally fatal. Of the 783 operated on in the Hospital for Infants, in Paris, 191 were successful. Guersant operated 156 times and saved 28 children. Martini operated 141 times and saved 66 children. Of those recovering nearly all belonged to that class that, it is claimed, would have recovered without an operation. Of the 351 cases operated on, by eminent French surgeons, for laryngitis, 312 died. One of the surgeons of Paris operated forty times and lost every case. While the success is not flattering the operation must not be abandoned. Where the indications are so plain we cannot do our duty and do less than open the windpipe below the obstruction and allow of the ingress of air.

The great trouble is, probably, in the manner in which we treat those cases after the operation. It is not alone from blood poisoning that our cutting becomes a bane, but often from a gradual asphyxia brought on by a pneumonitis. The air enters the lung almost direct; the great cavity that acts as a kind of warming closet is now cut off, and, instead of the air entering the lung at a temperature of normal blood heat, it oft

enters the capillaries of the lungs at a temperature far below it. Now, to overcome this, is one of the first objects to be met. Keeping the temperature of the room up to 90 or 100° will not do, even if it were possible to so regulate temperature. After the operation has been performed, under the careful use of the antiseptic spray, and the tube made secure, the throat should be well protected by six or eight folds of new unbleached cotton, extending down to the breast and well up under the chin. This cotton pad should be replaced every five or ten minutes by a new one — after first wringing them out of a hot solution of carbolic acid ʒj to ℥viij water. The nurse, in applying them, leaves the opening, which should be free, immediately under the chin, by simply raising the pad up sufficiently. This enables the patient to breath a moist aïr at, at least, 90° temperature. In case there is a disposition for plastic matter to form, after the operation, and the tube frequently becomes clogged up, an additional pad should be provided, of some four thicknesses of cotton cloth and a circular hole of about an inch in diameter, cut out of the middle and stitched around the edges to prevent the folds from slipping; and, after wringing it out of carbolized water as dry as possible, place it around the neck with the hole opposite the opening in the tube. This should be worn constantly. In case it becomes soiled replace by a new one, but never have the throat unprotected while at work at it. In regard to clearing the tube, you must be very careful about this. The plan of using these little tube cleaners, made out of bristles twisted between two wires, cannot be too heartily condemned. While you can very readily remove obstructions of mucus with them, you at the same time scratch and wound the delicate membrane lining the bronchia and spread thereby the destructive inflammation further on. If the removal of the inner tube does not free the passage, you should try the use of small feathers dipped in the carbolized water (which should always be warm, and of the strength prescribed) and slipped dry between the fingers. Sometimes it becomes necessary to withdraw the outer tube a small distance in order to free its point, and then replace it. But this is the great point to be kept in mind. Your patients do not die from obstructions of the tube; hence, do not be eternally picking and gouging at the tube. Guard your patient well against the plastic exudation and the

possibility of a fatal asphyxia from capillary bronchitis. This you can only do by protecting the throat as suggested.

Now, as regards what we usually consider the general treatment, I will simply give my views and experience at the risk of appearing egotistical, and leave the formulating of all the plans of treatment, as set forth by the various authors, to those with more inclination and leisure for the task.

First—I will tell you what I would not do: I would not rely on unslacked lime vapor. I would not give enormous doses of chlorine mixtures. I would not give large doses of quinine and iron. I would not give brandy and egg-nogg, which is just as erroneous in theory as it is hazardous in practice. We care more, at this stage, to utilize the present energies of the system, rather than to force upon it this class of remedies, the tendencies of which are to excite the heart and aggravate the disease. Soon after the operation, when the surroundings have been made as comfortable as possible, I would order:

R. Ammon. Carb.....ʒss
Extr. Ipecac fl.....gttxv
Morphiæ Sulph.....gr. j.
Aquæ.....ʒiv
M. Sig. Teaspoonful every hour.

If arterial excitement runs high, give one drop of Norwood's Tinct. Verat. between the doses, for two to four hours or until you control the circulation. This for a child from one to two years old. In case you already have lung complication leave out the morphia, and quiet the child with belladonna or aconite in minute doses, not to exceed the eighth of a drop repeated at intervals of an hour. In conjunction with this treatment, allow nothing to eat or drink except a beef tea made of the Leibig's Ext. Meat and cold water. So soon as the fever subsides and nutrition is fully established, you can begin the use of your blood remedies. If you think best to use iron the oxysulph. or mur. tinct. is the best. From two to three drops in a little lemon syrup (made from the acid) is the very best way to give it. This quantity every two to four hours is sufficient, and is all that the system will appropriate. Should the heart, at any time, show evidence of failing, half a teaspoonful of brandy may be added to each dose of the ammonia mixture. The temperature of the room should be maintained at 70°, as near as possible, hanging the thermometer over the child's head. Whenever, in your

judgment, the object has been attained for which you gave any particular medicine, leave it off and don't leave your patient in the hands of a nurse without calling attention to this fact.

And now I will say a few words about the difficulties of the operation. Not for the benefit of the older and experienced members of the profession, or the metropolitan student who may be under the ægis of reliable help at any moment, but for those young men, who are remote from assistance, and who may, at any time, be called upon to represent the best talent of our art in relieving this formidable malady of childhood. I want to say to you that if you, in your judgment, believe an operation will save your patient, don't fail to perform it. You will need but few instruments. Those usually found in the pocket case will answer. The operation is not free from danger. The arteria innominata and an unusual distribution of the carotids, may make cutting in this vicinity exceedingly hazardous; but so would it in any case, where there was a very great deviation from a normal state. After the external incision, which should be about one inch down to near the upper margin of the sternum, the finger should frequently explore the wound, and all muscular tissue and fascia should be divided as above directed; and when you have reached the trachea, first see that all hemorrhage has ceased before dividing its rings. Now, have some one assist you in holding the wound apart with the tenaculum, made secure in the cellular tissue, while you press in an opposite direction with the finger of the left hand, and with the right hand introduce the bistoury from below and cut upward about two rings. After waiting for a few moments for the spasmodic coughing to cease, remove all mucus or blood clots, so that the track of the incision, as well as the trachea, is free; then introduce your tube. If you have no regular tube, use the male end of your catheter, filed off at the lower end. I had a friend once who, not having anything better, used a small alder after removing the bark and punching out the pith. In case you are operating for the removal of a foreign body, you will probably find that, if you keep the wound well on the stretch, that the effort at coughing will likely cast it up. If not, try to get hold of it with the curved forceps. As soon as the foreign body is expelled you have nothing to do except close the wounds, which will likely heal by first intention.

If these directions are followed, I do not hesitate to say that you will succeed in doing all that any one can do under the circumstances; and not be compelled to wait at the cross-roads' cabin, with night upon you and no Blucher to help, and pray for some one to relieve the little sufferer, and at the same time relieve you of the great responsibility.

Article VIII.

Investigations of Utero-Placental Circulation.* By Ferdn. Smith M. D., Frankford Mo.

Some two years since, while preparing a paper on placenta prævia, my attention was called to some inconsistencies in the prevalent theory of the utero-placental circulation.

Since that period, I have given much of my unoccupied time to its investigation and though wanting many of the opportunities necessary for perfecting the study of the subject, as well as high magnifying powers I have endeavored to use diligently such as happened to be within my possession; making close examinations upon specimens from both man and the lower animals. But it is not my object, in offering this paper to dogmatically assert views that I may have adopted from my investigations, but to simply present them for your further consideration, though opposed to opinions expressed by some of our best and most esteemed authors.

The theory of direct inosculation of the maternal and fœtal vessels, finds but few if any advocates at the present time, while that theory which advocates, that the maternal blood is poured into the sinuses from whose walls are suspended fœtal tufts, whose coats are being constantly bathed with the maternal blood, and this returned by the uterine veins to the circulation of the mother, is the one adopted in our leading text-books.

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* Read before the Tri-State Medical Society at Louisville, Nov. 12 1880.

The one that I am more inclined to accept, is, that the maternal circulation composed of capillaries, and fœtal of tufts, are distributed throughout the entire placental mass, and in such intimate relationship that by the principles of endosmosis and exosmosis nutrition and purification of fœtal blood is maintained. The generally adopted theory has the following objectionable features:

Considered by analogy, the theory mentioned makes the human species an exception to a physiological fact which nature does not repeat. Our most popular works on physiology begin their analogy with the investigations upon the hog, which nurishes its fœtus by simple contact of its maternal and fœtal membranes and casts its young without laceration or hemorrhage. Their next instances are the sheep, cow, etc., (ruminants) which present the complication of interlacing of the vessels, but no adhesion of the tissues; for by careful manipulation, each set of vessels may be separated without laceration. The third instance noted, is the cavernous, in which the two sets of vessels are adherent in a zone around the interior of the uterus, but at either extremity are simply in contact, the belt alone being expelled in parturition; and in no one of these examples do they make the sinuses necessary for fœtal nurishment; and in these analogous illustrations, my own investigations, on the lower animals, have convinced me that this arrangement of the circulation is correct. But why should this analogy be carried so far and then be entirely exchanged for that of sinuses in the human female only? Thereby violating the analogy, as seen in operation within all the other organs of the animal economy.

Then again other physiological objections occur: Why construct a capillary circulation for certain purposes and gradually extend the same to meet the increasing demands of nutrition and purification of fœtal blood, and, as the development approaches its termination, break down the entire capillary system and fuse it into sinuses for which nature has shown us no demand? Besides by this arrangement, venous and arterial blood would be mixed in the same vessels. And again, blood poured out of the arteries into those cavities—sinuses—would produce stasis and a tendency to or complete coagulation.

The result of the following experiments which I have made tend to confirm me in the opinions above expressed; that the placental mass is made up of fœtal tufts and the capillaries of

that portion of the uterine mucous membrane embraced within its border.

I have examined a large number of placentas, from different classes of subjects, and in no instance have I been able to find the sinuses as described. On viewing the maternal surface of the placenta, that has passed to its full term, without any lesion or accident, we find it covered with a smooth membrane very thin and following irregular undulations; below the surface, this terminates at its rounded border, being continuous with the decidua reflexa. Into the umbilical artery I inserted a small nozzle attached to a common Davidson syringe, with which I injected clear water, which distended the placental tufts, and, passing through the entire ramifications, soon reappeared at the mouth of the placental veins. This I continued until the water flowing from them, ceased to be colored. After having thus thoroughly washed the vessels, I secured the extremities by ligation, and then injected air through the same channels, which distended the entire placental mass, but gradually escaped through the tissues, ultimately leaving it in the same relaxed condition as before. I then injected a freely flowing solution of indigo in sizing. This was permitted to remain for some time, till it was set. I then cut from it thin sections and placed them under the microscope. The sections of fœtal tufts with the blue injections were to be plainly seen, while surrounding them and inosculating with each other, in every direction was another set of vessels distinguishable by their natural color, and as plainly visible as the first. These I conceived to be the capillaries of the maternal mucous membrane.

Now, on taking another view of the internal surface after injecting the fœtal vessels as previously described, we find the undulations more marked; with the thumb of each hand placed parallel with the other, permit a depression of the placental mass to come; press the thumbs apart, and with but slight force the membrane will be torn, and beneath will be seen, what will appear as little fleshy threads, running in all directions across the fissure made by the rupture of the membrane. Among these will be noticed the blue loops of the fœtal tufts. Now, on the maternal aspect of the placenta, we sometimes, at regular interval and localities, find oval apertures penetrating the placenta. These I have tried to inject with different substances, and in every instance I have found that the injection breaks up the

capillaries of maternal circulation and forms a *cul de sac*, which might be easily mistaken for a sinus. To account for this peculiar action of the injected material, would be the next step in an attempt to sustain our position. Let us examine the structure of those large vessels as they enter and pass through the uterus. After entering the substance of this organ, they have left their external covering, and, according to Prof. Meigs, whether arteries, veins or capillaries, when deeply inserted within the tissues of an organ or viscus, always leave their intimate tissues solely as membrana vasorum communis. On injecting any substance through the uterine arteries, the muscular substance of the organ will support the pressure; but so soon as that pressure has passed into the capillary vessels of the placenta, whose few connecting fibres have been absorbed and left them no support save the endangium surrounding them, they readily become ruptured, and, breaking down, would give the appearance of sacculated cavities within the substance of the placenta.

I have had but one opportunity of examining the placenta in connection with the uterus in the human subject. This was from a woman, dying from puerperal eclampsia. At no time, and in this instance, I was not able to make the injection pass into the capillaries of the maternal portion of the placenta. The cause of my failure in this instance, I attributed to the following circumstances: 1st. That a physiological action takes place toward the end of pregnancy in the decidua sclerotina, preparing it for separation from the uterine attachment; 2d that the effect of uterine contractions may have caused some obstruction to the ingress of the injected material at some point, while at others the membranes of the vessels were ruptured at its margin with the placenta and the substance either passed into the interspaces between the capillaries, breaking them and crowding them aside; or found its way between the uterine and placental walls. And in my review of Prof. D Alton's six experiments, I was surprised to find that every injection had been made with air, and especially as my own experiance had shown me that air injected through the fœtal portion of the placental vessels had filtered through the tissues and made its escape. And I can but believe, should we be enabled to procure a subject which had died in an advanced stage

of pregnancy from other causes than parturition, by using an injecting fluid with proper care and of the proper consistency, we should satisfactorily demonstrate the existance of the original capillary circulation of uterine mucous membrane, as forming the maternal portion of the placenta.

Article IX.

Conjectures on Tactile Sensibility.* By W. J. Cole, M. D. of Blairsville, Ind.,

I take as an anatomical basis of this paper the delicate bodies, known as the principal seat of tactile sensibility, the Paccinian and tactile corpuscles, and the end bulbs of Krause. I may be excused for referring briefly to the anatomy of these little organs, as the description will show their great adaptability to the performance of the functions I shall attribute to them. The Paccinian corpuscle consists of a great number of concentric layers of connective tissue, between which a transparent fluid and capillary twigs, have been found. The nerve at its entrance parts with its white substance, and the axis-cylinder runs forward through a cavity in the centre, and attaches itself to the opposite extremity. This anatomical condition presents the most delicate arrangement of the axis-cylinder for the reception of vibratory impulses from very slight external impressions. This arrangement also suggests the great probability of polarity, the axis-cylinder and the fluid contained between the layers of connective tissue completing the circuit. Thus maintaining an electro-magnetic intermolecular activity of the morphological contents of the corpuscle. If we regaed these corpuscles as the generative batteries of that electro-magnetic element commonly designated as "*nerve force*," "*nerve energy*," "*a vital force*" etc., what evidence can we find to sustain

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the position? We have in the brain several concentric layers of nervous substance that present some uniformity of anatomical outlines to that of the Paccinian corpuscle. And the generative properties I have attributed to these corpuscles, presents a no more intricate, or inexplicable problem than that presented by the evolution of thought by the action of the delicate nerve cells of the gray substance of the brain.

Every physician recognizes the presence of a *Subtile element*, therefore only its mode of origin need be discussed. The position of the gray matter in the economy, and its structure, and internal arrangements appear to render it more suitable for a discharging than a generative organ of nerve force. Its position being generally remote from the parts subject to the most active nutritive changes, would seem to negative its generative qualities. However, if we regard it as a discharging organ, or a receptacle and regulator of this nerve force then its position is most beautifully arranged for the performance of this function. For instance, the gray matter found at the junction of the nerves with the brain and spinal marrow, and whose function is yet unknown, I regard as a receptacle for holding an increased quantity of this *subtile element*, that impressions from without may be imprinted with additional force on the nerve centres. And to give internal impressions an increased impetus toward the terminal apparatus. Virchow tells us (p. 275) that he discovered a greater number of the Paccian corpuscles in lunatics, than in persons of sound mind. This would appear to justify the inference that a very intimate relation exists between the brain and these corpuscles. And that their increase in size, was due in obedience to that law of nature which demands for every injury a compensation. The mind having lost the important power of reason, and the peculiar nervous energy usually demanded for the performance of that function being compelled to recapitulate the portals of the mind, would be likely to concentrate at other points most congenial to its activity. Those points being the Paccinian corpuscles, an increase in their development would very naturally be expected. But since Virchow found them in greater numbers, and as we cannot permit ourselves to believe them to have been formed anew, after the maturition of all the other tissues, we are forced to the conclusion that they previously existed in such an infinitesimal form, as to escape the highest powers of

artificial vision. And they remain so until some morbid condition arises in some part of the nervous system, which demands an increased activity in them, which causes an increase of development and renders them visible.

Special terminal apparatuses have been demonstrated in the eye, the ear, the Paccinian and tactile corpuscles and the end bulbs. And if they are never demonstrated in muscular and glandular tissue, their cells and fibres, with their connective tissue form terminal cavities—so to speak—which are capable of bringing a greater amount of surface directly under the influence of the nerve centres than any other arrangement we can conceive of. Therefore, I conjecture that the electro-magnetic element permeates all the inter-molecular space of all the animal tissues. And that it is generated, not in the gray nerve substance, but in the Paccinian corpuscles. And that the gray matter is simply a receptacle or regulator of this element. And that this element is subject to various influences, which may be divided into internal and external. The internal, arising from the force called mind, and is represented by voluntary motion; and that attractive and repelling force which exists between the centres and terminal apparatuses, and which is represented by involuntary activity. The external impressions are simple contact, heat, cold, sight, hearing, smelling and taste. And that all impressions, whether internal or external, are produced by disturbing the equilibrium of this *subtile element.*

I also conjecture that all the separate and varied characters of tactile sensibility, such as *consistency*, roughness, smoothness, heat, cold etc., are each represented by its own peculiar character and number of vibrations. Equilibrium can be represented by a straight line, thus, ———————— and there may be as many separate sensations in every organ of sense, as there may be variations made from this line. That is, a smooth surface may be capable of exciting only a tremulous motion, which of course would be one of great rapidity, but at the same time regular and uniform; while a rough surface may excite an equal number, but of a different character.

I regard animal heat as the result of the activity or agitations of this *subtile element*; and that cold is the lowest form of vibration that can be produced in it. And that they become lower and lower until that state which so much resembles, and does result in molecular death has been reached. For this element

which I regard as the basis of all animal and vegetable life, as well as that of nutrition and reproduction, has been compelled by its natural antagonist to desert its post of duty, and the quiet of *death* reigns, simply for the want of that activity so essential to life.

It is the custom of the profession in all undemonstrated theoretical questions to accept such as offer the best explanation of the greatest number of natural phenomena pertaining to theory. And I believe there are no questions relating to general or special sensibility, which can not be explained by this one. And so thoroughly am I impressed with the truth of this doctrine, that I believe there are as many vibrations in some parts of our organism, in one second of time, as there are seconds in our mortal existance. Dalton says: "Impressions of any kind made on a sensitive organ, remain for a short time after the removal of its immediate cause." That is, the impression excites its own vibrations, which continue just so long after the cause has been removed as is required to establish an equilium in the element thus excited. Again Dalton says: "The organs of sense after a time become accustomed to a continued impression, so that they no longer perceive its existence. If a uniform pressure be exerted upon any part of the body, the compressing substance at last fails to excite sensations, and we remain unconscious of existence. In order to attract our notice, it is necessary to increase or diminish the pressure, or change its locality or direction." That is, when pressure is first applied to an organ of sense, it excites disturbance or waves in the terminal apparatus, and if the pressure be maintained with uniformity for a certain length of time, the equilibrium will again be restored notwithstanding the pressure. But if the pressure be increased or diminished, or its locality or direction changed, it will be sufficient to again destroy this equilibrium; and the sensation is again rendered manifest to our senses.

It has always been impossible for me to conceive how sensation could be produced in any other manner, than by a perturbating influence of some kind causing an agitation sufficient to affect the usual nervous equilibrium. A good proof of this theory, is the condition established by clinical observation, that a spicula of bone, a rifle ball or any foreign body pressing upon, or being imbedded in a nerve, may produce epilepsy, partial paralysis, or loss of sensation. I believe at first this obstruction

produces a local derangement in the nerve fluid in its normal passage from cell to cell or from nuclei to nuclei which soon affects the gray cells of the medulla and upper portion of the spinal cord. Looking upon the nerve fluid as being endowed with electric properties, then an obstruction occurring in the course of the nerve trunk, would cause all the nerve energy to be expended at that point, instead of being equally diffused over all the parts supplied by the terminal branches of the nerves. And it would only be a matter of time until this obstruction would have the gray cells of the medulla fed up to the discharging point, which represents an epileptic paroxysm.

When sensation is lost from this cause, the waves proceed toward the centre, until they come in contact with the obsruction, when they may be destroyed or modified in character, and the brain either receives no impression at all, or a false one. And in paralysis from the same cause the *will waves* may be destroyed, modified or neutralized in a like manner. I believe, local and general irritation may find a good explanation in this theory. If we can regard stationary cells as being bipolar, it at once explains to us the cause of the activity of the cell contents by the well known law that *similars* repell, and *dissimilars attract* each other. If this could be proven by delicate experimentation to be true, we would have smooth sailing through many of the turbulent seas of medical mystery. Then we could readily understand how the advancing tooth excites a higher electric state in the tissue of the gums. And also how this irritative agitation is sent to the discharging group of gray cells from which the nerve arises, and from which thence are discharged or rendered manifest at other points most susceptible to its influences. Therefore irritation is a result of electric activity, which may be induced by a great variety of material substances, as well as agitations arising in the mind. And any agent that is capable of inducing a high degree of electric excitement in the cell content of any tissue, and maintaining it a certain length of time, is capable of causing irritation, and heat will increase in proportion to the amount of activity. The effect of which on matter is a dispersion of its articles, hence an encroachment is made upon the caliber of the capillary vessels, which causes them to impinge upon the corpuscular elements of the blood. This marks the first appearance of congestion, and henceforth irritation and congestion go hand in hand together.

Every adjacent cell thus agitated by an increased electric state, adds to the electric state of the parts in the same manner as the "wire coil" or the "Voltaic pile" is increased by a repetition or duplication of the same force. Virchow tells us (p. 325) "Now that by the investigations of Dubois Raymond, activity has been shown to exist in nerves even when in a so-called state of repose, and that it has been discovered that a nerve, even seemingly at rest, electrical processes are continually going on, and that it constantly produces an effect upon the magnetic needle." * * * * * "When an excitation takes place in a nerve, we now know that a change in its electical state is connected with it, a change which, from all that is known to us, concerning electrical excitation in other bodies, must of necessity be referred to a change in the position which the individual molecules assume to one another."

The sense of taste being somewhat intermediate between "tactile" and special sensibility may be briefly considered here. When there are chemical affinities between bodies, under proper circumstances, certain action or motions take place between their particles. This motion or chemical agitation often produces heat, which is evidence of rapid activity. Some substances have powerful affinities for each other, while in others it is scarcely perceptable, and in others still there are none at all. And substances undergoing simple solution imply a certain amount of atomic activity. Upon these facts I base my ideas of the sense of taste. In the mouth we have a chemical laboratory, where all alimentary substances may create their own peculiar agitation by uniting with the salivary secretion. Each diffirent savor may be represented by its own number of vibratory impulses produced in the terminal apparatuses of the gustatory nerves.

I speak with a full appreciation of the trepidation with which the profession accepts anything that leads from the well beaten paths of accumulated knowledge. But as I have but little reputation—as an original thinker—to lose, I venture my conjecture with a freedom that might not characterize the writings of the more eminent of my hearers.

ARTICLE X.

THE MANAGEMENT OF WOUNDS. By DAVID PRINCE, M. D., of Jacksonville, Ill. A DISSERTATION, READ BEFORE THE MEETING OF THE TRI-STATE MEDICAL SOCIETY. (Illinois, Indiana and Kentucky,) held in Louisville, November 9, 10, 11 and 12, 1880.

(Continued.)

PRECAUTIONS PREVIOUS TO OR DURING SURGICAL OPERATIONS WITH REFERENCE TO THE AVOIDANCE OF PUTREFACTION.

Two conceptions are at the base of the precautions against the putrefactive complications which retard the healing of wounds.

One is the seclusion from the surfaces of the causes of putrefactive fermentation, whether these causes be supposed to be organic germs or chemical agencies. The other is the preservation of the power of resistance of the exposed wounded surfaces.

It would seem, from abundant observations, that the contact of the atmosphere with its load of ferment will, in one case result in a putrefactive action, while in another case in the same atmosphere, union by the first intention will take place. The reason why the wounded surfaces in the latter case adhere, and in the former case they do not, must lie in the wound itself. One is prepared to become the seat of putrefaction and the other not. The reason why wounds of the face are in less danger from septic influences than parts more distant from the circulating center is the greater vascularity of the tissues and the more rapid production of organizable exudations.

The new formed tissue has under it an abundant vascular support, enabling it to resist the influence of destructive agents.

The nutritive processes being slower in the extremities, there is a necessity for keeping guard against septic intruders until the new surfaces have acquired sufficient power of resistance.

1. The first preventive is the absence of an atmosphere containing an infection of erisipelas, septic fever or hospital gangrene.

2. The second preventive is the cleanliness of the cutaneous

surfaces of the parts to be operated upon, and of the sponges, instruments and fingers of the surgeon and his assistants.

The surface may be washed with carbolized water, or, when it is not intended to apply plasters, they may be smeared with carbolic acid ten per cent. in oil. The sponges may be soaked in a saturated solution of carbolic acid, the instruments dipped in 95 per cent. carbolic acid or in a strong carbolized oil, and the fingers cleaned with a nail brush and dipped in carbolized water or smeared with carbolized oil.

The neglect of these precautions endangers the introduction into a wound of those agents which may originate putrefaction and erisipelas. Mr. Lister dwells especially upon the danger of introducing into gunshot wounds septic ferments by the employment of the finger in explorations.

3. The third preventive is that of nature, which secures the covering of the wounded surfaces with a blood clot. If this is wiped away only at the last moment before bringing the lips of the wound together, the surfaces are exposed to the air for the briefest period of time for the lodgment of offensive material; and the wound has the shortest possible period for those alterations which take place in connection with the evaporation of the moisture of the surfaces.

4. The fourth preventive is the water applied to the surfaces in connection with the removal of blood. Anything deposited from the air is likely to be washed away and the surfaces are subjected to evaporation during the briefest period possible.

To this end a stream of water flowing over the wound for a brief period is calculated to carry away suspicious deposits.

Ice applied for the purpose of averting hemorrhage by the contraction of the vessels, unavoidably works toward the same end by producing a watery flow as it melts.

A watery spray tends to precipitate and wash away atmospheric dust and to dilute any chemical agent afloat, while the surface is at the same time kept from drying.

5. The spraying of the wound with ether, though it may be done with the primary intention of producing cold and contracting the vessels, secures a deposit of a portion of the aqueous vapor of the atmosphere, bathing the part with a dew saturated with ether, serving not only to wash over any foreign substance, but by the action of the ether to destroy

the vitality of any animal or vegetable substance already developed out of the germ state. Ether is entirely harmless to a wounded surface and on this account it is always a good application to favor union by adhesion.

John Johnson, a healthy young man, aged 17, was, in the year 1866, injured in the middle third of the thigh, which was crushed under a car wheel, rendering a high amputation necessary. This was done in two flaps.

The vessels were all secured by accupressure according to Simpson's third method (by which the artery is compressed) by a needle on one side and on the other by a wire looped over the point of the needle—brought over the artery and twisted around the needle at its heel. By this means the needle can be drawn out first and the wire afterward.

Before bringing the lips of the wound together, they were very freely sprayed with ether. I take a paragraph from my notes, made at the time. "The nebulizing apparatus was employed with a very satisfactory result, using ether as a cooling agent. I had previously settled the fact, that ether is no impediment to union by the first intention. Ether favors union by arresting capillary hemorrhage and favoring the early establishments of the exudation of organizable lymph. The parts were brought together and secured by sutures of iron wire deep and shallow, leaving two inches of space open at the lower end of the incision for drainage; after which the stump was firmly bandaged to secure close coaptation and immobility of surfaces. Very little drip followed and though the patient had a localized pneumonia following the injury, he rode in a buggy on the 25th day to a photograph establishment and by means of crutches helped himself up stairs.

Reasoning upon the good results that have followed the spray of ether, it has been conceived that they are not owing chiefly to the reduction of temperature, but in great part to its power of preventing putrefaction. From this theory comes the practice of pouring ether upon and into wounds immediately before closing them, in case in which it is not convenient to employ the spray. By the use of ether in spray or by pouring it upon incised oracerated surfaces, the parts are cooled, and they are moistened by precipitation from the air. Organic agents are brought in contact with a fluid unfriendly to their continued vitality.

The combination of carbolic acid, iodine and other antiseptics with the watery spray, is supposed to precipitate or destroy living floating agents and to make the surfaces upon which the precipitated spray falls, non-receptive of poisonous invaders.

That this latter result is the one upon which the safety in part depends is rendered probable by the consideration that the atmospheric ferment is not destroyed by any agent which the surface can tolerate, nor by a temperature much below that of boiling water nor even by a high temperature without a continuance of the heat through a considerable period of time. In the art of canning fruit, it is found that for some varieties, as for green corn, several hours continuous boiling is necessary to prevent fermentation after sealing in air tight receptacles.

It cannot therefore be that the atmospneric ferment, whether it be chemical or organic, is decomposed or destroyed by such a weak agent as a spray of a watery solution of carbolic acid or a solution of iodine or of any other substance capable of being tolerated by the surface which it is intended to protect. If these hypothetic agents, chemical or organic, are not destroyed, they are precipitated upon the surfaces and that too in as great quantity, as if they were conveyed in the dry state by dry air.

That the septic sequences in wounds depend more upon the condition of the exposed surfaces, than upon the brief presence of air is rendered probable by the fact that in hypodermic injections a minute portion of air is often pushed in from the syringe after the injected fluid and yet a septic result is extremely rare.

The arcolar tissue becomes infiltrated with air on a large scale in emphysema following solution of continuity in the walls of the air passages; the skin being blown up and distended to a great degree, and yet there is such exemption from any inflammation or toxic sequence, that the possibility of such a result rarely enters the mind of the practitioner. In these instances the surfaces are not dried, and the preparation for sepsis is not made. The seeds may be in the air which is introduced, bnt like seeds in the ground, they wait for an exposure at the surface with favorable conditions.

The lesson from this consideration is not to permit surfaces to dry under direct exposure. In this view, assiduous sponging during the progress of an operation removing the clot from the surface, is not good practice.

On the supposition that the moisture acts upon the exposed surface to make it non-receptive of the atmospheric ferment, the explanation lies chiefly in the protection of the surfaces from dying and the albuminous exudations from that incipient step toward decomposition which attends the evaporation of a portion of its water. While the presence of a weak combination of an antiseptic can do no harm, it is well to have an appreciation of the value of moisture as such.

6th Immersion. This leads to the mention of the plan of operating under water, or in such circumstances that the part under treatment can be kept under water as much of the time during an operation as is compatible with the operavtie procedure. This most effectually prevents the drying process with the attendant aptitude of the serous membrane or of the raw surfaces for the septic or putrifactive process.

The water alone cannot keep away the septic ferments, for it has been shown by Lister, Tyndall and other observers that water will set to work the process of decomposition when added to substances otherwise protected by subjection first to heat and afterward sealed or permitted the contact of air filtered through cotton or purified by settling of its dust so as be free. from its floating ferment.

The protecting effect of simple water must therefore be in preserving the exposed surfaces from that aptitude for putrefaction, which consists in drying. The addition of carbolic acid and salicylic acid to the water for a period no longer than may be necessary, for a surgical operation may destroy bacteria in the developed state, but it can have little effect upon the ultra-microscopic germs, which (upon the germ theory) are to be dreaded.

While speaking of immersion, the case of the exposure of the peritoneum must be mentioned. This is a surface, which in the natural state is perpetually bathed in a moist secretion, so watery, as to be changed in its physical character by evaporation, and so small in amount as to permit of an injurious drying by a short exposure to a dry atmosphere. It is not protected during an operation by a blood clot as on incised surfaces. Hence the necessity for special care to avoid the drying influence of atmospheric exposure upon the chemical theory of septic fermentation, the observations already referred to, make it certain that the destruction of the supposed chemical ferment

is equally difficult, so that it makes no material difference whether the germ theory or the chemical theory be adopted, both theories being equally hypothetic and the practice empirical.

The germ theory has the advantage in this, that it has been proved that the ferment can be sifted out of the air by simply passing it through cotton wool, and that being heavier than air it will settle if, as in a tight box, the air can be kept still for a few days. It is therefore not a gas as would be supposed if chemical, but a substance which will adhere to the fibres of a cotton mesh, and settle to the bottom of still air.

That putrefaction is the chief cause of the bad behavior of wounds, is proved by observation, and admits of no shadow of doubt. The resulting surgical fever which was formerly supposed to be owing to the contact of oxygen, is now believed to be owing to the irritation of putrid pus upon the surfaces and its absorption into the blood.

The proof that putrefaction depends upon minute organisms,or infusoria, the germs of which are ultra-microscopic or discoverable only by lenses of the highest power, is so far proved as to have become the scientific opinion of the age. It is pretty well made out that these germs are kept floating in the air by its currents and that still air, contained in a closed box, drops them to the bottom. It is also pretty well made out that they adhere to the meshes of substances containing small spaces as is the case with cotton, so that air passing through thin spaces becomes free from these germs and from all kinds of dust.

The proof of this absence of dust of all kinds, is the absence of the power of dispersing light. A gleam of light is sent through opposite openings in a box containing air purefied by filtration through cotton, or settling for several days, while the observer looks across the beam, through another opening, so that the line of vision is at an angle with that of the beam of light. If the air is free from dust nothing is seen, while floating particles are seen, not individually but as the appearance of mist. The blueness of the sky is attributed to minute dust floating in the air, too fine for discovery by the microscope. Air flowing over Mont Blanc is said to be nearly free from this dust, and therefore unapt to excite putrefaction.*

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* Among the sources of information upon this subject are short papers by several authors.

Nature. Jan. 9, 1873 vols. vij and viij,

If it is impossible to destroy this ferment and impracticable to have an atmosphere altogether free from it, in which to work, a large measure of our precaution must be directed to the prevention of susceptibility in the wounded surface.

It has been said that bacteria have been found when there was no smell or other evidences of putrefaction, and that on the other hand putrefaction has been found where bacteria could not possibly be found unless they or their germs perforated the tissues.

Billroth inclines, on the ground of his investigations to the belief in the presence of minute organisms in the healthy body in a latent condition. According to this view, they will be brought from behind to the surface of the wound, and will find in the secretions to which air has had access matter fitted for their activity.*

In reference to this question Thiersch says:

"I agree with those who believe that the action of the atmospheric ferments furnishes the preliminary for sepsis, hospital grangrene and pyæmia. I assume that by chemical decomposition under the influence of the ferments, poisonous matters are set free, and that the ferments are not poisonous."†

In opposition to the significance attached to the presence of bacteria where there is no putrefaction, it is claimed that there

Nature. Jan. 27th, 1876 p. 252, and Feb. 3d, p. 268. Feb. 10, 1876. Feb. 24, 1876 p. 324.

Lancet, Feb. 26, 1876.

British Medical Journal, Feb. 5, 1876.

Spontaneous generation, by W. H. Dallinger, V. P, R. M. S., in Popular Science Monthly, Aug. 1876 p., 448 from Popular Scieene Review, Feb. 6, 1876.

References in this article are made to Bastians "Evolution" and the Origin of Life, pp. 13-17 p. 179.

Philosophical Transaction, 1874 p. 475.

McMillans Magazine, Feb 1876 p. 379.

Monthly Microscopic Journal, vols. x-x iij, vol. xi pp. 67, 70.

Same, April, 1876.

Same, vol. xij pp. 262-263.

Spontaneous Generation, by JohnTyndall, F. R. S. Popular Science Monthly Feb. 1878 p. 476.

Same, Popular Science Monthly, March 1878 page 591.

* Thiersch, on the clinical results of the Lister treatment of wounds German Clincal Lectures, 2d Series, 1877 p. 71, New Sydenham Society.

† German Clinical Lectures.

are different kinds according to the different chemical actions which they excite and accompany.

Mr. Lister in his lecture before the International Medical Congress in Philadelphia, in 1876, referred to experiments by himself, in which the bacteria found in connection with the souring of milk, were of a different form from those found in conection with putrefaction.

He claims that bacteria found under antiseptic dressings, where there is no oder of putrefaction are of a kind which do not generate putrefaction. The same may be said of those which are reported to have been found on the blood and in places inaccessible to air

The claim has been made that the offensive smells of chronic abcesses situated in the neighborhood of the intestines, is not owing to the putrefaction, but to the transfer of chemical combinations from the interior of the intestines during life, in the same manner in which the flesh of animals is spoiled by becoming the receptacle of odorous emanations, being rendered in this manner unfit to eat, if the intestines are not soon enough removed. This is not supposed to be putrefaction. but a gaseous absorption and transfer from the intestinal tube to the tissues of the neighboring parts and to collections of pus.

A case in illustration occurred in the practice of the writer, in which an abscess in the abdomen, simulating a full bladder was aspirated, and a quart of exceedingly offensive pus evacuated. Upon the supposition that this pus was in a state of putrefaction, it was supposed that the abscess would refill, but it did not. The unevacuated pus must have been absorbed. The fluids and gases of the intestinal tube must be antiseptic from the long preservation of retained feces, and the odor thus derived must have another meaning than that of putrefaction.

So of the odor of internal abscesses connected with bone which often exhibit a very offensive smell when opened. It requires no re-examination of the subject to settle the question, whether this oder is dependent upon putrefaction. The smell is different from that of open air putrefaction of pus and the attention of observers is called to the question of its character.

Whatever may be said of the germs which are supposed to be the incipient condition of all that is offensive in wounds, and whether or not it may be possible to avoid them, or to destroy them, the way is now plain with regard to the subsequent treat-

ment of wounds into which germs have entered, or into which it is feared that they may enter.

We have only to employ a solution of an antiseptic of sufficient strength to be inimical to bacteria in the developed state; or on the chemical theory inimical to the continued and complete reproduction of the ferment. A solution of such a degree of feebleness as to be friendly to the tissues of an injured or wounded part, may be death to the microscopic beings that have to live in it, or destructive of the chemical changes necessary to the developed condition of the putrefactive fermentation. The spray meets an important indication to prevent this dessication, but immersion meets it it better.

Before opening the peritoneal cavity, the patient may be laid in a bath of water of the temperature of 100° F. with chloride of sodium sufficient to bring the water near to the density of serum, to prevent injurious osmotic action, with a small addition of salicylic and carbolic acid, to have an effect to destroy developed bacteria. Across the bath tub and under the trunk of the patient should be stretched a wide towel, two yards in length, with a cylindrical attachment of wood which may conveniently be made of a broomstick. Each of these ends should be placed in the hands of an assistant, and by this towel the trunk is to be raised from the water at any moment. As the water becomes opaque from the presence of blood, the trunk is raised so that the surface of the abdomen is out of the water, for the briefest period compatible with the amount of seeing necessary for the operative procedure. The fluid is friendly to the peritoneal surfaces, and it is not important that it should all be removed before the final dressing, as it will speedily be absored. In addition to the antiseptic advantage s of this immersion, may be mentioned the avoidance of this adhesion of a blood clot to the peritoneal surface. As the blood flows in the water it becomes diffiused to a degree incompatible with the formation of a dense clot. The wiping of the peritoneal surfaces with sponges is avoided. The peritoneal surfaces are protected from being cooled by the contact of air, which will almost unavoidably be at last fifteen degrees lower than that of the blood, avoiding of the causes of shock and the heat of the extremities will at the same time be kept up to that of the water in which they lie.

In this connection it is conventient to quote fro Prof. Weber, who in a lecture before an association of naturalists and physi-

cians at Giessen, Prussia in 1864 reccommended the performance of paracentesis of the thorax with the part submerged in salt water. "In the clear salt water it could be seen how the pus escaped during the expirations, and how the salt water entered during the inspirations, to wash out the pus in the next expiration."*

TEMPERATURE.

7. During the conduct of an operation or in the first dressing of injuries, the depressing influence of extension and prolonged application of cold must be avoided. It has been settled by observation that heat is more successful in arresting hemorrhage than cold, so that it becomes good practice to finish the preparation for dressing by the application of heat.

It is suggested that immediately before closing the wound in which it is desired to have union by the first intention, the clots should be cleaned away by sponges taken from water as hot as can be borne by the hand without decided discomfort or at a temperature of about 120° F.

Sponges of sufficient number or size should be employed to cover all the surrounding surface at once and they should be held in close contact with the increased or lacerated surfaces about two minutes, and on the removal the wound should be finally closed. If the wound should be opened on account of any suspicion of bleeding, the same process of the application of hot sponges should be repeated.

By this process all oozing of blood from vesels too small for torsion, pinching, acu-pressure or ligature immediately ceases, and the surfaces are ready to be bathed in colorless plastic exudation.

The safest rule in relation to temperature is the comfort of the patient and in cases in which the sensation has been annulled by the failure of nerve communication the preservation of the natural temperature of the body is the safest rule.

The use of a thermometer with a flat bulb for application to to the surface is convenient in determining the temperature of the part. The stem is wrapped with cotton, both to prevent the dissipation of heat and to afford the means of holding the thermometer in position without exciting pressure upon the bulb. The bulb must necessarily be so thin that pressure upon

* Am. Jour. Med. Sci. April, 1865, p. 512,

it will cause the mercury to rise too high in the stem and vitiate the reading of the temperature.

It is usually desirable that the application of heat or cold should be uniform and not by fits.

For the application of heat, substances that are poor conductors, or hot water surrounded by poor conductors or a stream of warm water through a coiled rubber tube will serve the purpose with occasional renewal.

For the application of cold, the surrounding of an ice bag with poor conductors diminishes the tendency to fluctuation at the same time diminishing the intensity of the cold. The use of the coiled tube conveying a perpetual stream of water gauged as to the quantity passing and generally of the temperature of the room in which the patient lies, secures a difference in temperature between the coil and the body of from 20° to 30° F. with a capability of varying the rapidity of the abstraction of heat by changing the hight of bucket or other reservoir or of varying the orifice of exit of the water.

For the application of heat or cold with moisture, the open irrigation, the immersion, and the poultice come in requisition.

CATHARTICS.

8. In a comprehensive view of the management of wounds it is proper to notice as a precautionary measure the securing of the best constitutional condition.

That condition is the one in which there is an appetite for food which is not the result of starvation. Hence a cathartic is a wise precaution in all cases except those in which the patient has an exhausting sickness or is feeble from age or from pathological or voluntary starvation.

The cleaning of the *primæ viæ* as a precaution or preparation is especially valuable in favoring a rapid recovery from the gastric derangement attend upon the use of an anesthetic.

The propriety of this precaution is not dependent upon a condition of constipation, for it is well known that a loose condition of bowels is generally best overcome by the use of a cathartic which removes irritating material and reduces the congestion of the portal circulation as well as the whole alimentary tract.

On the same principle the diet of a patient about to undergo an operation should neither be starved nor full-fed. The same

rule applies in the subsequent treatment. While the tissues including those of the wounded parts must be nourished, the disturbing influence of a gastric derangement following improper diet may in doubtful cases turn the scale against recovery.

The capability of the complete digestion of food is the limit of allowance.

As in the regulation of the temperature, the feeling of the patient is of one the most important elements in determining the allowance of food.

The use of so much alcohol and opium in agreeable forms will increase self control and diminish the susceptibility to reflex disturbances, will aid in preventing exhaustion, and so far favor that reaction which ought to follow depression of deep anesthesia and the nervous shock attendant upon extensive disturbance of the anatomical unity of the tissues.

[TO BE CONTINUED.]

Translations.

FROM THE FRENCH.

EXCERPTS FROM LATE FRENCH JOURNALS. [Translated for the JOURNAL.] By A. H. OHMANN-DUMESNIL, A. M., M. D., of St. Louis.

TREATMENT OF HYDROCELE IN CHILDREN.— Dr. Augé, in the *Courier Médical*, gives a method of treatment which he has applied a great many times to children, aged from two to eight years; and *never* had recourse to tapping to effect a cure. His method is sufficient to cause absorption of the fluid. It consists in applying daily, or every other day, elastic collodion, to the sac or along the cord if it be a hydrocele of the cord. The same means, tried upon a young man aged eighteen, and upon several adults, failed in each case. From this it appears to be only applicable to children.—[*Paris Médical*, Jan. 5, 1881.

PYROGALLIC ACID IN THE TREATMENT OF PHAGYDENIC CHANCRES.—Dr. Vidal has obtained good effects from its use in the treatment of lupus erythematosus, and lupus valgare, as also in the acneic form. An ointment of pyragallic acid seems to limit its action to the morbid tissues and only slightly attacks the neighboring skin, after three or four applications. His first trial was on a man who had a chancre at the frænum and two upon the abdomen, which soon became phagydenic. Sulphate of copper and iodoform and other means failed. The ulcerations were enlarged considerably after a month of this treatment. A pledget of lint, covered with an ointment, composed of one part of pyrogallic acid to four of vaseline was applied once a day, and in three days had modified the appearance of the sores. The iodoform dressing was resumed and cicatrization rapidly followed. The pus of chancroid loses its virulent properties after treatment with pyrogallic acid. All cases dressed with the ointment given above soon lost their phagydenic character and yielded readily to ordinary treatment.—[*France Médicale*, Jan. 6, 1881.

ALKALINITY OF THE BLOOD.—Dr. Garel, after given the various sources of error in the determination of the alkalinity of blood, gives as the result of his investigations the following: The most incontestable fact is that venous blood is less alkaline than arterial, not only in man but in animals. Also in cyanotic subjects it is comparatively less, due to the presence of carbonic acid, in both cases. In febrile diseases it is greater in some cases and less in others. This gives room for various hypotheses. If the alkalinity is diminished, it may be admitted that there is more carbonic acid present in the blood corpuscles. If, on the other hand it be increased, it may have a connection with the destruction of the corpuscles; for the red globules, when destroyed, might yield their potash to the plasma. The alkalinity of the corpuscles is much greater than that of the serum.—[*Lyon Médical*, Jan. 2, 1881.

TREATMENT OF SYPHILIS. By Martineau—The first year: Mercury for three or four months; the iodide of potassium for the same length of time; return to mercury for two months; then iodide of potassium for the same time; a month of rest.

The second year: A month of mercury; two months of iodide of potassium; two months of repose; a month of

mercury; three months of iodide of potassium; three months of repose. Then comes the turn of the sulphurous remedies; syphilis then reappears most often under their influence; the mercury that has been retaken is easily assimilated.

The third year: A month of mercury; two months of iodide; three months of sulphur treatment. If one season at the sulphur springs and baths does not bring out a syphilitic crop, the disease is cured. If the patient was already diathetic, the primary diathesis must be treated, as it seems to facilitate the cure of the syphilis.—[*Ibid.*

TREATMENT OF GONORRHŒA.—Zeissl, in the *Wiener Wochen.* 1879, gives the following for acute gonorrhœa: Three or four injections daily and feebly astringent, viz.: 2 centigrammes (gr. 1-3) of hypermanganate of potash in 200 grammes (℥viss) of distilled water; if in eight days there is no amelioration, the strength is increased, not exceeding 15 per cent. Later, injections of 30 centigrammes (grs. v.) of sulphate of zinc in 200 grammes of water are given. In case of failure try solutions containing sub-nitrate of bismuth or pure and powdered kaolin 5 grammes (grs. lxxv) in 200 of water, or sulphate of zinc and acetate of lead (as in the injection of Ricord), 2 grammes (℥ss) of each for 200 of water. If the affection becomes chronic, the treatment consists in putting bougies in the urethra and letting them remain from five to ten minutes, besides the following injections: Sulphate of cadmium, basic acetate of lead, acetate of zinc and tannin, acetate of zinc, tincture of cachou, and tincture of opium, per chloride of iron, sulphate of copper, alum, etc. He uses also at times bougies made of equal parts of kaolin and glycerine and suppositories of .07 per cent. of ext. belladona to mitigate pain. He is opposed to strong injections at the commencement of the disease, and even later they should only be employed with the greatest prudence.

In the treatment of the chronic form he speaks of the use of the endoscope, sounds and bougies.

In regard to the indirect treatment he considers: matico cubebs, copaiba, and perchloride of iron. The author further insists on the known fact of the co-existence of prostatic hypertrophy and chronic urethritis.—[*Ibid.*

FUNCTIONAL TROUBLES OF THE STOMACH IN DYSPEPSIAS AND THEIR TREATMENT.—Dr. G. Robert remarks that dyspepsia being essentially chronic and always of long duration, it can cause organic changes in the digestive apparatus, such as dilatation of the stomach, atrophy of the peptic glands, catarrh, etc. Immediately following these there is a deficiency in the important function of digestion which may ultimately induce marasmus.

The treatment of these gastric troubles requires two things: to add to the insufficiency of the digestive ferments and to modify the atony of the stomach. These indications have been met by a combination of pepsine and hydrochloric acid associated with pancreatine and bitters. It has been found serviceable in phthisis, chloranæmia, gastro-intestinal troubles of children, etc. —[*France Médicale*, Jan. 8, 1881.

INTERNAL ADMINISTRATION OF CARBOLIC ACID IN PUERPERAL SEPTICÆMIA.—Dr. Siredly has tried this method with success in cases where quinine and carbolized injections failed to do appreciable good. On account of its disagreeable taste it can only be administered in pill form. It can be given in quantities of 1.5 grammes (grs. xxii) daily. The formula employed is as follows:

R. Acid. Carbolic..... ..... grs. jss
Pulv. Gum. Acaci..... .....
Pulv. Glycir..... ..... } aa. q.s.
Saponis..... .....
M. Ft. pil. No. 1.

Sulphate of quinia can be added to the carbolic acid, forming a semi-solid mass, to which an inert powder may be added to roll into pills.—[*Jour. de Med. et de Chir. Prat.*, Jan., 1881.

GANGRENE IN LIPOMA.—Dr. Périer recounts a case of this kind occurring in a woman, aged 66. She had carried, for twenty years, on the internal and superior aspect of the thigh a lipoma of the size of two fists. It became very inconvenient, and besides was constantly irritated. The skin at the surface ulcerated, a portion of the tumor became gangrenous at its center, which for some months was discharging an offensive pus. Each day the cavity became larger. It was removed and healed readily under antiseptic treatment.—[*Ibid.*

CRANIUM PERFORATED BY A KNIFE BLADE.—Dr. Langier presented to the Anatomical Society of Paris a calvarium taken from a young man aged twenty-two, who died four days after receiving a violent blow upon the head in a street brawl. At his death he had all the symtoms of encephalitis. On examination he found the scalp had a wound three centimetres in length in the middle portion of the left parietal region. In the middle part of the wound there was a corresponding fissure in the skull of five millimetres filled by a metallic looking object. On post-mortem examination a knife-blade was found projecting two centimetres into the brain and solidly fixed in the skull.

The case is interesting, because :

First—It shows the rare occurrence of a blade of small size and tolerably weak, penetrating the parietal bone of a healthy adult, with a facility and sharpness of cut that is only generally observed in wounds of soft tissues or of cartilages.

Second—It indicates what difficulties may be presented by an intra-cranial foreign body, of small size, in regard to diagnosis in the absence of any history of the case.—[*Progrès Medical*, Jan. 8, 1881.

INFLUENCE OF KNOTS IN THE CORD ON THE LIFE OF THE FŒTUS.—M. Guéniot presented to the Academy of Medicine twins who were dead at birth, which, according to him, was caused by knots in the cord. M. Tarnier observed that it was a prevalent idea, among accoucheurs, that they were not dangerous; for, however tight they be, it is rare to find them so to such a degree as to impede the flow of blood, which is demonstrated by *post mortem* injections. At a subsequent meeting M. Gueniot remarked that he had M. Farabeuf to make injections in the umbilical cords of the two fœtus he had presented. In the arteries of the one cord, the fluid did not pass the knot, but the vein was open. In the other cord, the vein and the arteries permitted the flow of the injected liquid. From this he concluded that the fœtus which had the impermeable cord must have died first, on account of trouble in the circulation; the other one probably died from intoxication.

M. Depaul opposed this view, for autopsies have demonstrated that clots may exist in the arteries, without there being any knots. As to the death of the second fœtus being due to intoxication it was not possible for the previously dead fœtus to

become septic unless it putrified, a thing which is not possible in the amnotic sac. M. Tarnier thought it more probable that a clot arrested the passage of the injected fluid in the cord.—[*Paris Médical*, Jan. 5 and 12, 1881.

FOREIGN BODIES IN THE UTERUS.—Dr. Hugues has lately published the following:

First—In a woman, ætat. 23, multipara, the forceps had been applied. A few minutes after delivery, an intense hemorrhage set in; a sponge saturated with toilet vinegar was squeezed twice in the uterus, and left there. The flooding ceased, the os contracted and the sponge could not be withdrawn. The next day as he was going to dilate the cervix to remove the sponge, he found it lying in the vagina.

Second—A primipara, ætat. 19, had an easy delivery but the placenta would not come. After an hour's time the physician introduced his hand to separate it. At that time his hand was tightly grasped by the contraction of the uterus. The delivery of the placenta was accomplished, but a gold ring from the physician's hand was left behind. The second day after there was a slight hemorrhage. The finger introduced into the vagina found the cervix open and the ring back of the internal os. By hooking the finger behind it the ring was extracted. The consequences were of the most simple kind.

Dr. Hugues makes the following conclusions:

First—Foreign bodies introduced in the *post partum* uterus are the source of no serious accidents;

Second—Whenever such bodies can immediately and without inconvenience be removed, it must be done without hesitation; but, in cases of difficulty or contra-indication, it must not be forgotten that there are advantages in temporizing.

Third—The uterus more often expels the bodies by its own efforts.

Fourth—In the case of a late intervention, the cervix is easily dilated and the removal effected with no difficulty.—[*Gazette des Hôpitaux*, from *le Pratician*.

SUPPURATION OF A GOITRE—Cure.—A laborer was admitted to a hospital and had a goitre of a mean diameter of 54 centimetres. A short time after his admission he was seized with typhoid fever. In the course of the disease the surface of the goitre became reddened and it doubled in volume. After some

time fluctuation was very evident over the whole tumor. About one month after the patient's admission, the tumor was incised, a large amount of pus being found. A drainage tube and antiseptic dressings were applied, the wound being daily washed with carbolized water. About one month later the patient was discharged cured, there remaining but two or three very small nodules on the side of the larynx.--[*La France Medicale*, Jan. 13, 1881.

FALSE TUBERCLE.—M. Martin, by injecting different kinds of dust, subcutaneously in animals, has succeeded in producing lesions anatomically similar to tubercle. But no further signs of generalized tuberculosis are subsequently observed, from which he concludes that these are tubercles anatomically similar but pathologically different from the true tubercle.—[*Gazette des Hôpitaux*, Jan. 11, 1881.

TREATMENT OF ACNE.—M. Hardy advises the use of the following, in this affection:

Dry sulphide of potassium .... } Tincture of Benzoin..... .... }	5 parts.
Rose Water.....	300 parts.

Mix and apply to the face morning and evening.--[*Paris Medical.*

TRAUMATIC RUPTURE OF THE BOWEL SIMULATING STRANGULATED HERNIA.—M. Guinard reports a case to the Anatomical Society, in a man aged 56. He was struck upon the abdomen, and the next day vomited greenish matter. A physician was summoned and found a left inguinal hernia, which the patient had for ten years, and which was well retained by a bandage. It appeared below the bandage at the time of the accident, and after fruitless attempts to reduce it the attending physician concluded that it was stragulated hernia and gave a purgative of castor oil. On the next day the vomiting persisted, and no gas or fecal matter was evacuated per rectum. He was sent to the hospital and there seemed to labor under the symptoms of strangulation. Reduction was then easily effected, but the symptoms persisted and the patient died that evening.

The autopsy revealed a generalized purulent peritonitis. The hernia was found reduced and with no strangulation. In the pelvis were found about twenty lentils with pus and oil, and

on a level with the promortary a solution of continuity in the small intestine. It was an opening the size of a silver dime, rounded and situated on the side of the insertion of the mesentery. The edges were already healing; it was at 1.70 metres from the ileo-cœcal valve.

The following are the conclusions arrived at:

First—The error in diagnosis was unavoidable, being given the co-existence of the hernia with very precise symptoms of strangulation: vomiting almost fecal, etc.

Second—There was rupture of the intestine without any trace of contusion (not even ecchymosis) on the abdominal walls.

Third -- The rounded form of the intestimal wound as if punched out, makes it seem probable that there was merely rupture of a cicatrix produced by a previous ulceration and which had become thin.—[*Progres Medical*, Jan. 15, 1881.

Proceedings of Medical Societies.

ST. LOUIS MEDICAL SOCIETY.

SATURDAY, Dec. 4th, 1880.

On the Affection of the Economy by the Syphilitic Virus without the Intervention of a Wound or Abrasion of the Epithilium or Cuticle.

By W. Hutson Ford, M. D.

Mr. President — At our last meeting (Nov. 27th), some interesting question relating to the contagiousness of syphilis were discussed. I took occasion to express myself in favor of the opinion that syphilitic virus may enter the economy directly through the unbroken cutaneous or mucous surfaces, being in this respect fully in accord with a proposition of similar character enunciated in your valuable paper read before this Society on the evening of Nov. 13th. I propose this evening as briefly as possible, to adduce some further considerations on this, and incidentally on some kindred topics and to make a few citations substantiating the positions taken by me in the debate of last Saturday night.

In *limine*, I must respectfully request the Society to bear in mind the essential difference of a chemical and physical character, which obtain between bodies commonly classed as "poisons." The word "poison" itself is a commonplace vernacular term habitually used to denote a substance foreign in kind to the economy, unlike any matter physiologically present or ingested into it, and capable of causing injury or abolishment of the vital functions by its entrance. Poisons may be divided in accordance with their physical characteristics, into two great classes, the colloidal and crystalloidal. To the first belong the morbific contagia, whether they consist simply of masses of unformed albuminoids, or be composed of hyaline material containing morphological elements—such as, pus of all kinds, septicæmic fluids, the poison of glanders, of syphilis (as I think no one will deny) of hydrophobia, of diptheria, and a long list besides. They are all essentially albuminoid and therefore of colloidal nature. To the second class of poisons belong all the poisonous drugs, without exception, as far as I

know, strychnia, morphia, brucia aconitia, atropia, oxalic acid, arsenious acid etc. A third or sub-category of what are commonly called poisons includes bodies of gaseous or fluid nature, which either corrode the tissues or combine with the constituents of the blood and fixed elements of the nervous substance. Among these may be mentioned the mineral acids in concentrated strength, caustic alkalies, noxious gases, such as sulphide of hydrogen, carbon protoxide, hydrocyanic acid etc. None of these matters are colloidal, most of them can be shown to be crystalloidal, and probably are so.

I design this cursory classification of "Poisons," merely to illustrate the remark that the entrance of a poison into the economy would appear to be controlled by the manner of its presentation and the nature of the surface to which it is applied in connection with its character as a colloid or crystalloid. I need not call attention to Graham's well known law of osmose, according to which colloids are unable to pass through membranes, which at the same time allow ready passage to all crystal, loidal bodies, in the latter case, however, with different and constant facilities of transmission, indicated by what is termed the "osmotic equivalent" proper to each.

No member present will refuse his assent to the proposition, that perhaps all crystalloidal poisons can make their way through the unbroken tegumentary surfaces whether cutaneous or mucous, or directly through the walls of the hollow viscera or of the smaller or even larger blood vessels or through the serous membranes. We are constantly dependent upon the ready transmission of dissolved crystalloids directly through the membranous expansions or walls of cavities not only for the prompt action of the medicines we introduce into the stomach, the rectum, under the skin or through it, but indeed also for the physiological absorption of the large quanlity of crystalloids contained in our food, and even of the albuminates themselves, which must first lose their colloidal character and as albuminose or peptone become soluble in water before they can pass through the walls of the veins.

Now in asmuch as colloidal matter are devoid of osmotic power, it must be quite impossible for them to gain an entry into the organism, unless through openings ready made or provided for the purpose. Nature herself in her great work of nutrition plainly appreciates this difficulty and has most effectually pro-

vided for it in no less conspicuous and distinctive a manner, than the erection of an entirely independent order of centripetal vessels, viz. the absorbents, whose function it is to take up and convey into the blood torrent, such colloidal material as has been poured out under pressure from the capillary vessels into the stroma of the tissues and has been either exhausted of its special strength by acts of individual nutrition proper to the part, or left as excessive in amount beyond its cotemporary necessities. Such colloidal matter — the crude tissue lymph, is taken up by the gaping meshes and stomata of the lymphatic radicles and centripetally. Here is no possibility of any such matter passing by osmose back into the blood-vessels again through these walls, unless the local pressure be greatly enhanced. It is true, that the passage of albumen through the vessels of the kidney has lately been shown to vary directly with the blood pressure, but in the case of lymphatic absorption no such pressure can be demonstrated. The act is essentially one of imbibition through gaping stomata, and is not in any way allied to osmosis. Now in the case of colloidal poisons deposited upon the tegumentary surfaces, it is plain that they cannot enter the system by an act of osmosis, but must gain entrance if they do so, by the route of the lymphatic system whose ramifications and terminal openings everywhere underlie the covering of the orderly or irregularly superimposed cells, which we call epidermic or epithelial tissue. Beneath the epidermis or epithelium the lymphatics lie ready to receive such colloidal matter, — does the layer of cells constitute a true obstacle to its passage? Must they be removed before absorption can take place? Can a colloidal poison like that of syphilis, of the dissecting room or of pyæmic subjects, pass into the lymphatic system, while the layer of cells is, as far as we know, unbroken by any visible or even invisible solution of continuity? Can such a poison pass between the epidermic or epithelial cells, for of course, as colloid it cannot pass through them, as morphia, nicotine, common salt, or any other crystalloid may readily do?

To these queries I must answer, that there can be but little doubt that such colloid matter may gain access to the superficial lymphatic system while as yet there is no real or visible abrasion or removal of cuticular or epithelial layer from its underlying membrane, provided, that the layer of tegumentary cells in question be either naturally moist or be kept moist by

design or accident. Especially may this occur where moisture is accompanied by a certain amount of pressure, such as would be produced by swelling of the parts (as in a tight inflamed prepuce) the presure of muscles (as at the entrance of the mucous canals) the pressure of contiguous surfaces (as in the flexures of joints or between contiguous corrugations of the skin) or by the act of friction, which is a mode of wave-like or peristaltic pressure, which need not be so rude as to remove the epidermis or epithelium. By prolonged maceration, therefore, the tegumentary cells would become swollen and dislocated from contact with each other, and thus cease to cohere strongly, leaving passages between themselves into which the colloidal matter would be drawn by capillary attraction or be pressed by some or one of the forces above named so as to come directly into contact with the lymphatic radicles beneath. It does not appear possible to me to suppose that any colloidal matter directly applied to the skin with concurrent moisture and the undoubted aid of friction or pressure, could fail to gain entrance into the economy, or to believe that it could do so by any other route than the one indicated, viz. between the cells of the epidermic or epithelial tissue, or through some minute hiatus of the cellular investment, brought about by the maceration presupposed, in conjunction with a distinct power of exciting inflammation proper to the contagious matter in question.

The fall of an epithelium is a prompt effect of its abnormal succulence or maceration, and in this respect a very common pathological phenomenon directly involved in the spread of inflammation along mucous tracts, as of gonorrhœa in the urethra. and of several morbid processes in the respiratory passages, and intestines. By such a method, infective inflammational ways advances locally. The epithelium progressively softens, and falls or is rubbed off, contemporaniously with the establishment of the new mode of action, or strictly, just after its inauguration. Application to the skin of many insoluble substances is well known to be perfectly competent to effect their introduction into the economy. Among these may be named, oily substances, mercury and sulphur. These matters pass into the economy with great facility through the skin, doubtless by the absorbent system, and without any loss of epithelium or epidermis sensible to the patient. The pressure implied by rubbing, which need be only adequate to bring the substance applied closely in

contact with the skin, is undoubtedly of decided influence in preventing absorption.

Such facts as we are able to observe in connection with the poisonous fluids of diseased surfaces, undoubtedly tend to corroborate the view that previous abrasion is by no means necessary for infection. Thus the matter sneezed out by horses or mules affected by the malignant schneideritis, even now prevalent, has been frequently fatal to man by being drawn into his respiratory passages, while the individual was apparently quite well. The contagious matter of glanders is also effective when placed upon a moist mucous surface, quite as much so as when applied directly to an abrasion. On this point Mr. Holmes remarks: "If a groom or any one handling a horse supposed to be glandered, is so unfortunate as to get any of the matter into a crack on his hand, or on to the naked hand, (whence it is probably transferred to the nose in most cases), or if any is blown directly into the nose, the same prompt and decisive measures should be adopted as are recommended in serpent bites or the bites of rabid animals; that is to say, the poison should be destroyed as promptly and as speedily as possible by caustic, and if possible, a ligature should meanwhile be tied above the part inoculated." (p. 100. Surgery, its Principles and Practice.) Between Glanders and Syphilis many analogues exist.

In the same connection Mr. Bryant remarks: "This poison (of glanders) to be absorbed, requires as a rule, a wound, or a delicate membrane, yet cases are on record where the disease has been set up by the wiping of the face with unclean hands or cloths. In man the poison is generally communicated through the nasal discharge from the horse and the discharge from farcy (chronic glanders) swellings. It can be communicated from man to man." (Practice of Surgery, p. 388).

The purulent secretion of gonorrhœa may set up a "blenorrhœal conjunctivitis by mere contact. No one, as far as I know has ever assumed the necessity of previous loss of epithelium or abrasion of the conjunctive for the kindling of conjunctivitis by contagion, either in this case or in the parallel one, of transmission of the inflammation, either of gonorrhœal or nonvirulent blenorrhœal conjunctivitis from a diseased eye to a sound one on the same or another individual.

"Gonorrhœal secretion from the urethra or vagina," says Stellway, "acts in the same way as the blenorrhœal, and may cause

pyorrhœa or purulent conjunctivitis." "Although disinclined with Græfe, to believe that fresh pus elements can be freed from the secretion by evaporation of the menstruum, and that they may be kept suspended in the atmosphere for any long time, under ordinary circumstances, when there is a strong current of air, Stellway neverthless admits that when we see myriads of fine filaments, dust particles, which are observed in the sunlight after sweeping out a ward or sick room, we cannot avoid the belief that there may be among them bits of charpie etc., which have been saturated with pus, have become dry, and are now whirling about in lhe air. "Various considerations and the result of direct experiments (Marston Potinger) made with dilute and dried pus, show, says the same writer, that the greates care should be observed, and that we shall always do well to proceed as if the contagion through the atmosphere were an assured fact." p. 381. Also, "It may easily happen that small quantities of infectious material enter the eye when one converses with or examines a patient, especially when the faces are near to each other, by the bursting of little vesicles or bubbles of the viscid inflammatory product, caused by the entanglement of air due to the motion of the eyelids." (Ibid.) In all such cases, no previous wound, abrasion, or loss of epithelium in the conjunctiva is necessary for the kindling of the characteristic inflammation.

Many lamentable instances of the propagation of diphtheria by the reception of the inflammatory product upon the lips, into the eyes and mouth of assistants or medical attendants, testify to the facility with which the diphtheritic process may be communicated without at least known or supposable abrasion or other impairment of continuity of the recipient mucous surfaces.

With regard to the infectious matter of the dissecting room, Mr. Holmes remarks, "The phenomena of dissection wounds, occur in an acute or chronic form. The former is perhaps the most formidable and the most rapidly fatal of all the forms of septicæmia. I have spoken of them as "wounds," but the inoculation may pass through the unbroken skin, and has done so in many recorded instances—notably in that of Sir J. Paget." Mr. Paget has described his own case and drawn particular attention to the possibility of the infection through the unbroken skin of the hands, in a very interesting article.

Mr. Erichsen (Vol. I. p. 214) takes especial care to state the case as follows: "It is, however, by no means necessary for *post mortem* infection that there be an abraded or unbroken surface through which the inoculated matter may be introduced into the system. Imbibition may take place through the unbroken cuticle; and not unfrequently it is through the medium of the hair follicles that the septic poison enters. In the graphic account given by Sir James Paget of his own case, the septic influence is stated to have been absorbed through the unbroken cuticle of the hand immersed in pyæmic pleuritic effusion. I have known an instance of the poisoning through the hair follicles of the back of the hand to happen to another very distinguished number of our profession." (p. 214, Vol. I.)

Mr. Bryant, states that the fluids from a patient who has died from glanders, peritonitis and scarlet or puerperal fever are far more dangerous than any other. "Indeed," says he "there is reason to believe that the contact with such fluids is capable of giving rise to the disease (dissection-poisoning) without any local wound or abrasion."

We find, thus far, that in the several categories named, viz., in the transmission of glanders, of malignant schneideritis, of gonorrhœa from the vagina to the male urethra and conversely, and from these localities to the ocular conjunctiva, of diphtheritic inflammation, of intoxication by the poison of the dissecting room, both sound pathological theory and the opinion of leading authority concur to establish the proposition that, although in such instances a crack, wound or abrasion undoubtedly facilitates the entrance of the poison into the economy, such actual lesions of the tegumentary surfaces are not all impermeable to the pas sage of the toxic matter, which may thus pass in, and no doubt does so in a greater number of instances, by far, than is commonly supposed, through the unbroken skin.

Still further, the chancroidal virus, must be held to affect the parts with which it comes in contact by a strictly similar mechanism—and it is hardly susceptible of dispute, that while in many cases the virus is directly absorbed through a laceration or abrasion, in many, if not in most others, it affects the parts to which it is applied directly through the tegumentary layer of epidermic tissue. Indeed the covering is but a feeble barrier to the entrance of most substances applied to the skin or mucous membrune, and its power to defend the subjacent tissues from im-

pressions of a chemical or chemico-vital nature is exceedingly feeble and for the most part null. In common with other boys learning to swim in the docks and by the sea-shore at the South, I have been frequently stung by the large medusa, called the sea-blubber. From the bell-shaped body of the animal, long gelatinous strands depend. If these are brought in contact with the back, legs or arms of the swimmer, the effect is instantaneous, and consists in acute smarting and burning and with redness with wheal-like elevation of the skin corresponding to the parts touched by the parts of the animal described. Here indeed, no pressure would seem to be necessary for the entrance of the poison, and not the slightest friction, competent to effect a displacement of epidermic scales or cause an abrasion. The gelatinous stings, whose mere slimy contact occasion these sudden and marked inflammatory effects are so soft as scarcely to be seized by the fingers. It is obvious that the phenomena observed cannot be due to a volatile matter, but must be owing to some matter miscible with water and not strictly soluble in it, presumably of colloidal nature, whose entrance into the organism at least profoundly enough to affect the nervous and vascular system, is by no means more rapid than the transference of these peculiar effects by the vaccine and other viruses as proved by direct experiment.

It must be held that all the products of inflammation are capable of causing inflammation, and indeed of a grade of inflammation and even a variety of it strictly corresponding to that in which the material supposed has itself originated. The power termed by Billroth, phlogogenous, is also possessed by putrid matters. It is not necessary, however, that the pus in question should be putrid. Billroth states that he injected the filtered fluids of decomposing flesh into the thigh of a horse; in twenty-four hours the whole thigh was swollen, hot and painful, and the animal very feverish. He did the same thing with the same result with fresh (not decomposing) abscess pus, in a dog, Holme's Surgery, p. 47.) All modern surgery shows that the secretions of an inflamed part are essentially phlogogenous. characteristically able to maintain existing inflammation or rekindle it in parts lately affected, and even to originate the process anew in parts with which they come in contact, especially if this contact be prolonged and be accompanied by friction or other modes of pressure. The surgery which could fail to provide

for constant removal of these products of inflammatory action, whether *lymphoid*, be it observed, or distinctly purulent, by free drainage and frequent, and even at times continuous ablution with fluids capable of preventing putrefaction and supposed also to be competent to annul the special phlogogenous properties of the secretion would now be justly regarded as belonging to the past, and to times of distinctly inferior knowledge. It is easily preceived that the mere fact of the stagnancy, which of course, is equivalent to the putrefactive or septic decomposition of an inflammatory product in communication with the atmosphere, is able to endow it with the power of exciting inflammation when simply laid upon the epidermis or epithelium, and allowed to remain for a certain period of time in the moist state, or when the application is constant and renewed day by day. Such a stagnation of the inflammatory products, presumably at the temperature of the animal body, either within or upon the parts which furnish them, or upon contiguous parts of the same or of another individual, implies the generation of acrid matters, among which ammonia and its compounds are very probably constantly present. Putrefaction is then essentially irritating to a wound, and by thus, enhancing the previous grade of inflammation, causes wounds to secrete *pus* which would not do so if putrefaction of their secretions be prevented. It is by securing the asepticity of the interior of wounds by maintaining their previous or normal asepticity, by correcting a previously existing putrescent state, and by preventing the retrograde conduction of the putrefactive process from without inwards, that Listerism obtains so many cures of wounds and injuries without the appearance of pus whose presence as Lister justly maintains, constitutes undoubted proof of an unnecessary and harmful grade of the inflammatory process, very apt to defeat the aims of the surgeon.

It is therefore by the sojourn of organic fluids, in or upon the organism, and especially of morbid ones, with attending and inevitable putrefaction, antiseptic precautions being omitted that such fluids, and especially pus becomes irritating, and capable by their irritating property of itself of establishing inflammation. *Dead pus*, and doubtless all exudations and secretions which have become septic, are likewise phlogogenous. This is positively known for the secretions of the alimentary canal, of the nasal passages, of the auditory meatus, and for the

urine. Nearly, or in some cases, quite innocuous, when putrescent, these matters are peculiarly dangerous, and kindle most violent inflammation in the areolar tissues, or excoriate the skin over which they flow, the active influence showing its power while as yet, the epidermis or epithelium is intact. But even while fresh, and as far as we know quite aseptic pus is essentially phlogogenous and tends to reproduce the inflammation in which it originated, both in degree and kind by mere contact.

It is impossible not to agree with the following assertions of Mr. Jonathan Hutchinson on this subject. "All *living* pus," says he, "is contagious; I mean that all living pus-cells possess the power of setting up, when transferred to another home, if that home be a suitable one, a kind of inflammatory action similar to that from which, they themselves had originated. Gonorrhœa-pus will produce gonorrhœal inflammation, but note—it must gain a favorable tissue-home. It will succeed if put on the mucous membrane of the urethra, or on the conjunctiva, or into the nostril, or into the rectum, but in each of these parts it flourishes with differing degree of vigor, whilst on the skin, and possibly in the mouth, it will not live at all. The doctrine of the contagiousness of freshly produced (*i. e. living*) pus, explains much that we observe as to the spread of many forms of skin disease in which the secretion infects other parts of the patient's skin, or the skin of other persons. We have long been in the habit of applying the old term porrigo to all forms of eruption believed to be due to the transference of purulent secretion from part to part. Foot-rot in sheep is another excellent example of the contagiousness of pus. First, I have already said that the pus, if it is to grow on the new soil, must be living when you put it there. This is obvious. You must not expect the pus of an abscess, for instance, which is usually dead, and in an advanced state of fatty degeneration, to manifest any vital properties. It may possibly irritate, but it can do nothing worse.

Secondly, the precise character and stage of the inflammatory process which has produced the pus will be represented in the recipient. If you inoculate the conjunctiva with the pus from gonorrhœa in an early and acute stage, an acute purulent opththalmia will result quite different from that which would follow inoculation with pus from a chronic gleet.

Thirdly, it seems very probable that the pus produced by

any special tissue is contagious, or in other words, capable of further vital action by preference on some tissue of similar kind to that in which it originated. We may remember, in passing, that gonorrhœa of the male urethra rarely causes similar inflammation on the mucous lining of the prepuce, whilst in the female, gonorrhœal suppuration of the vagina almost always infects the urethra. We may venture I think, to believe, without fear of being wrong, that pus-cells, as a rule, prefer that their new habitat should resemble their birth places; those originating in the skin are contagious to skin, those in the glans (penis) to the mucous membrane of the glans, those from the urethra to the urethra, and so on."—*Lancet*, December, 1875.

These remarks of Mr. Hutchinson are introductory to a synopsis of his views of the relation of the soft chancre to syphilis, which he proceeds to enunciate; I have cited them on account of their clearness and their bearing upon other important points related to the present question. It is obvious that Mr. Hutchinson cannot suppose any abrasion, rent or crack in the mucous membranes necessary for the display of the contagious properties of the venereal or any other kind of pus, for living pus-cells are capable of a sort of spontaneous locomotion, and can penetrate the tissues of their own accord, or at least become insinuated between the cells of the epithelial layer which by the phlogogenic power proper to the pus itself, even while living and fresh, be it remarked, have become loosened from each other, and to some extent displaced. It is also quite possible, that in some way unknown to us, the phlogogenous, and specially contagious properties of contagious pus may be quickly transferred to another part or organism, while as yet the epithelial covering is absolutely unchanged, for it is almost certain that the commencing inflammation due to the presence and contact of the pus, must be kindled before the epithelium falls, for this is the very first effect of the incipient inflammation which must therefore have been set up by the pus in the tissue of the skin or mucous membrane, notwithstanding the presence of the epidermic or epithelial covering.

On this point, with relation to the contagiousness of the chancroid, Bumstead makes the following explanation, while of course, stating the well-known fact that the presence of a crack or abrasion of the skin or mucous membrane peculiarly exposes to infection by the soft sore. "But the question naturally arises,

whether this law is absolute. Is it reasonable to suppose that in all of the numerous cases of simple chancre, some solution of continuity must have existed, without which contagion could not have taken place? Is it not possible that in some instances, at least, the virus may have permeated the external layer of the skin or mucous membrane, without any denudation of the epidermic or epitherial layers? I am not disposed to answer these questions positively in the negative. It is one which physiologists are better entitled to solve; yet several consideration would lead me to believe that there is no necessity of explaining on the theory of endosmosis, certain cases of contagion in which no solution of continuity can be discovered. The epithelial layer of the mucous membranes is much thinner and much more readily removed than the epidermis of the external integument, Continued moisture, as is seen in cases of an elongated prepuce, is alone sufficient to produce a superficially excoriated surface; the effect is hastened if the moisture be combined with purulent matter, with the natural sebaceous secretions of the part, or with filth. The door of entrance may be merely microscopic, not visible to the naked eye, if it is only large enough to admit a single pus-globule, it will serve the purpose of contagion. It would therefore, seem sufficient to suppose, with Ricord, in case of inoculation without apparent solution of continuity that the virulent pus has at first acted like a common irritant, until the surface had become denuded at some minute point, which would enable it to exercise its power as a specific poison. If it has gained entrance within the open mouth of a follicle, the same effect will be accomplished the more readily." p. 322.

While feeling himself confronted by facts showing that at least a visible abrasion is not necessary for the contagion of the chancroid, Bumstead endeavors to show that some cells of the epithelium have in all probability fallen during an initial and non-specific inflammation; it is more logical, I think, to assume, that this inflammation was originally specific, viz.; similar to that in which the pus originated, and that the cells have fallen because such a specific inflammation existed *from the first*, directly due to the presence of the pus-cells, and to their passage between the elements of the epithelial layer.

Van Buren and Keyes allude to Cullerier's famous experiments on mediate contagion, in which it will be remembered, chancroidal pus was left in the vagina, in one case, thirty-five minutes,

in another nearly an hour, with failure to inoculate in both cases, the pus having been carefully washed out of its temporary rest, ing place after the period of time specially noted. These writers then remark as follows:

"These two cases at once raise the question, can chancroidal pus be absorbed except through an abrasion? Evidently not at once, as the two cases prove, nor probably in any length of time through the hard epethelium of the skin, for hospital patients handle with impunity their chancroids from day to day, and do not inoculate their fingers except through preëxisting abrasions; but that the poison may enter through a mucous surface visibly abraded is certain, whether by direct absorption, or by corroding for itself a way, has not as yet been demonstrated, but in all probability by the latter means. In this way may be explained chancroid with a comparatively long period of incubation. A man lies with a woman having chancroid. He inspects himself after the act and finds no abrasion, but neglecting to wash himself, pulls forward the prepuce and goes on his way. A small quantity of virulent pus remains in the little pocket alongside of the frœnum, where the mucous membrane is very thin and always moist. The pus by its acridity (I should rather say, by its distinct specific, and powerful phlogogenous power causing inflammation and epitheleal decadence,) destroys the superficial epithelium in a few days, and then finding a loop-hole for absorption, poisons the spot at once, and the patient appears, perhaps a week after his suspicious intercourse, with a chancroid only just commencing, the long period of incubation here being more apparent than real. In like manner, a few corpuscles rubbed into the mouth of a minute follicle during the friction (to which I have called especial attention,) which accompanied the sexual act could not be washed away, and by the same process of corrosion (more properly, phlogogenous power) give rise to a characterestic ulcer, after a period of apparent but not real inoculation (follicular chancroid) (pp. 181, 182. Genito-Urinary surgery with Syphilis)." Our authors are well known to entertain dualistic notions with regard to the nature of primary venereal ulcers.

In the case of Cullerier's patient, the period of time, from half an hour, to nearly an hour, during which the chancroidal pus was left in contact with the vaginal mucous membrane, was evidently too short for the transmission of its peculiar contagious

properties, too short for any erosion of the epithelium or direct kindling of inflammation of either simple or specific form. The cases are moreover in no way analogous to those so frequently occuring, in which chancroidal pus is carried for a day or two, in some crypt, or between some fold of the vagina or in the balano-preputial sulcus. Time is an essential element in contagion after this fashion. Van Buren and Keyes, however, very distinctly admit the possibility of the implantation of the chancroidal virus without the intervention of an abrasion. In the Letters on Syphilis, Ricord, at the time a unicist "acharné," when discussing the incubation of the chancre, expresses himself as follows: "But does artificial inoculation always give place to these consecutive series of phenomena? (viz, "immediate action, uninterrupted evolution, and the production of the echthymatous pustule" in artificial inoculation of the chancroid.) Are there not cases in which some time elapses between the period of inoculation and that at which the symptoms begin to manifest themselves—some interval corresponding with that observed in inoculation with the vaccine virus? *In ordinary contagion*, [*italics my own*] (he means evidently, contagion ordinarily observed) does not a tolerably long time seem to elapse between the inception of the disease, and the manifestation of its effect?" Most assuredly a most pertinent and practical question. "Undoubtedly, and such cases may have justified the inference that, in some respect, the theory of incubation is a legitimate one. But when we take the trouble to examine these facts with attention, we find that they have not been carefully appreciated. I have never observed similar cases in my numerous public experiments (*i. e.* cases where the effects of the inoculation of the chancroidal virus are more or less delayed, F.,). This result evidently depends upon the uniformity of my method of experimentation. My honorable colleague, M. Puche, who has experimented no less, if not more than myself has only once or twice seen accidents manifest themselves after the second or third day from the puncture. Every one who has studied the inoculation of syphilis knows that, when it does not immediately succeed, it is because it is negative. Nevertheless we can conceive that a superficial puncture, in which the virulent pus is deposited on denuded surfaces, may require a somewhat longer period to produce its effects. The first puncture made by M. Robert De Welz was very superficial, and it failed to produce its effect after the first day; se

that in this case there was something that might be said to resemble incubation. But the second puncture which I made myself followed the regular course. "What does that prove," may be asked by those who support the doctrine of the influence of the general state. "The first puncture had a slow development, because the organism was not sufficiently impregnated. The effects of the puncture were, on the contrary, rapid, because the virus had then invaded the whole economy." "This is all very fine," I will reply; "but here is a circumstance which slightly mars this beautiful theory. M. de Welz made a third puncture which, too superficial like the first, gave the usual result." "This my dear friend, is the explanation of the incubation. Without the assistance of this key, we understand how, in cases of ordinary contagion, (*i. e.* cases of chancroidal contagion as ordinarily observed in man F.) virulent pus, applied to more or less denuded surfaces, soon gives rise to a more or less rapid morbid action. We know by daily observation, confirmed irrefragably by the recent experiments of M. Cullerier (already mentioned F.,) that virulent pus may remain in contact with healthy surfaces without producing any alteration in them, or without undergoing alteration itself; (for periods varying from half an hour to nearly an hour, F.) but we also know that surfaces constantly bathed with virulent acrid and irritating pus, which excoriates *before* it acquires a specific character (*i. e.* as I take it, chancroidal pus may excoriate before the chancroid becomes *indurated*, as Ricord believed that it could do, F.) finally becoming eroded; and then the pus itself produces those conditions required for successful inoculation. In this sort of vesication, a period of greater or less duration must elapse before those specific effects, which simulate incubation, appear."

"For example, virulent pus is enclosed in a fold of the vulva, of the vagina, of the prepuce, or in the interior of a follicle; it is only after the pus has been there deposited for a longer or shorter period, that passing through the successive stages which I have just indicated, it acquires the power to inoculate. In all this we observe no specific effect (he means that all this does not tend to demonstrate the existence of any real period of inoculation for the chancroid, F.) but a physical and material fact, which visual observation daily demonstrates to those who are competent to discern. How many patients are there, who at first thought to be affected with only a balano-posthitis, finally exhibit symp-

toms of chancre? If to this circumstance you add the negligence of patients; their well-known lack of observation relative to matters which concern themselves—in consequence of which they are prone to regard as the period of *incubation* (sic) the time which simply elapses between the exposure to the cause of infection and its apparent manifestation,—you will find, my dear friend, with respect to both chancre and blenorrhagia, the explanation of those pretended incubations whose duration is of so elastic a nature as to vary between a few hours and several weeks and even months." p. 142, *Ed. of* 1852, *translated by Lattimore.*

I have given this quotation in extenso, although pressed for space on account of its very marked relevancy and the satisfactory explanation it includes, of the nature of what is termed the incubative period of gonorrhea and of the soft chancre at least at the time Ricord wrote his memorable "Letters."

I have endeavored to sketch in brief the methods of infection by products of specific inflammation, where no direct inoculation through an abraded suface is known to have taken place. It is in the highest degree probable that even the majority of such infections occur without previous abrasion of the epidermis or epithelium. Sojourn for a variable period of time, with any of the modes of pressure seems entirely adequate to cause the transmission of the properties of the contagious matter directly through the investing cellular layer even before this has been detached. In fact, the attendant formation of a vesicle shows plainly that the detachment, or elevation of the cuticle, in the case of the skin, or of the epethelium, is a secondary stage in the process. The inflammatory, even I think the *specific* inflammatory process has been communicated before the investing layer of cells is loosened or elevated into a vesicle. Langston Parker (1854) evidently follows Ricord in these views, stating that when directly inoculated with a lancet there is no period of incubation, but after a suspicious intercourse the primary sore (chancroid) generally appears after from four to eight days. "In the one case," says he, "the virus is introduced under the epidermis by the lancet. and in the other it only penetrates this membrane by a process of slow absorption. This view is supported by the experiments of Mr. Ceely of Aylesbury, who tells us that he has frequently succeeded in producing the vaccine pustules, by keeping lymph in contact with the epider-

mis for a certain period of time, *"without abrasion of the cuticle."* (italics in the original) [*Modern Treatment of Syphilitic Disease, p. 107.*]

It is only by this mechanism that we can explain "chancre," whether soft or ultimately indurated, of the urethra. Here the virus gains entrance into the dilated meatus and lodges in the lacerated vagina, or some one of the follicles of the urethra; after a period of so called incubation, a sore is established with accompanying discharge. "Duncan inoculated his own urethra by transporting into it some chancroidal pus. He got uretheral chancroid with double bubo." (*Petit Radel, Cours des Maladies Syphilitiques*, quoted in Van Buren and Keyes.)

We must consequently accept the conclusion that the soft chancre may be communicated by the mere contact of its pus with the skin or mucous membrane, provided the period of the sojourn be prolonged. As I feel myself constrained to believe in the unicity of syphilis, holding with Mr. Hutchinson that the so called chancroidal is a sort of bastard progress of true syphilis, or more strictly, that it is the result of inoculation of the secretions from irritating and suppurated lesions of secondary syphilis mostly. That the chancroid is syphilis, inasmuch as it is sometimes undoubtedly followed by syphilis I do not doubt. All who hold similar views must admit that syphilis can be communicated without previous abrasion. But may not the secretions of secondary lesions, or even the blood communicate syphilis without actual abrasion? I will conclude this paper by the following citations:

1.—A young girl entered the hospital with roseola and sore throat etc., evidently syphilitic. She denied sexual intercourse, and on examination was found to be a virgin. No trace of ulceration was anywhere discoverable. The only evidence of previous lesion upon her skin was a small cicatrix of purplish color, slightly hard, upon the radial aspect of the right arm, which she had not observed before her attention was directed to it. The girl was a nurse and had been carrying a baby on her right arm, frequently without a napkin. Examination of the child proved that its anus was surrounded by mucous patches. (Van Buren and Keyes, p. 514.)

These writers state that chancre is produced whenever upon the human body the syphilitic virous contained in the secretion of chancre, in blood, or any secondary lesion, is brought within

reach of the absorbents, by being placed upon a surface deprived of epithelium. That it may make for itself a way through the tender epithelium of mucous membrane, if left long enough in contact with it, as does the poision of chancroid, has not yet been proved, but from certain cases seems highly probable. It cannot get through the epithelium of the skin without an abrasion of the latter. Consequently, an abrasion, pin scratch or other solution of continuity is necessarily assumed by those authors, so far as the skin is concerned, in the trasmission of syphilis.

2.—Mr. Henry Lee details the following case illustrating the transmission of syphilis by mere contact, in his lectures on syphilis in the *Lancet*, Aug. 1875.

"A nervous gentleman who had never had syphilis had contact but not intercourse with a lady who had not quite recovered from her monthly period. There followed violent irritation of the glans penis; a lymphatic vessel on one side of the penis, enlarged to the size of a common writing quill, one of the corresponding glands became as large as a chestnut and painful. Some days after the frænum on one side became indurated, but there was no induration of the glans penis. A copper colored syphilitic eruption followed, and then in its turn, was succeeded by mucous tubercles on the lips and tongue.

It was subsequently ascertained that the lady had had an old syphilitic affection. There had also been a slight herpetic eruption on one labium and on a small part of the skin of the face. The disease in this case was communicated by simple contact, previous to which there was no lesion on the skin or mucous membrane of the gentleman. The lady some days afterwards, was carefully examined; there were two or three dark red pimples on the chest; the vagina was perfectly healthy, but there was a copious viscid tenacious discharge from the uterus." p. 351. Mr. Lee thinks that the contagion was affected in this case by the menstrual blood; it will be observed that there was no solution of continuity at the point of contact.

3.—A healthy woman was given a child to nurse. She carried the child upon her arm and allowed its mouth to come in contact with her shoulder. The child mumbled her shoulder and kept the skin wet with saliva. After a time induration occurred on the shoulder of the nurse. On examination, the child was found to be affected with mucous patches of the

mouth. The nurse in due time developed general syphilis. The narrator of this case states that probably there may have been a pin scratch on the nurse's shoulder. I prefer, as we have an undoubted right to do, to believe, in the absence of any demonstrated wound or abrasion, and in harmony with what has been advanced, that no lesion of continuity necessarily pre-existed. Indeed it is in a mechanism of this kind that we must seek for an explanation of that physiological absorption which Hunter believed in, and in support of which Lane, Marston and Lee have published observations. This appears to me to be certainly nothing else than the communication of syphilis by the contact of the secretions of secondary lesions with surfaces kept continually moist and subjected to one of the modes of pressure alluded to in the early part of this paper.

The indurated chancre fails to communicate itself to juxtaposed surfaces, because it is not auto-inoculable, but soft cancre and mucous patches commonly propagate themselves to the parts continually pressed against them. They also advance in orderly and unmistakable progression to invade contagious parts by the medium of their secretions, as from the anterior to the posterior portions of the vagina, from the vagina to the rectum, and from one point on the rim of the glans to others by the route of the sulcus balano-præputialis. In cases of tight foreskin a chancroid of the corona glandis frequently begets several successive ulcers of like character, as observed by Dr. Hodgen at our last meeting. This could only happen in consequence of the return of the chancroidal secretion beneath the prepuce under conditions uniting the necessary elements of such contagion, viz., prolonged sojourn, moisture and pressure.

On the Method of Contagion in Secondary Syphilis.
By R. S. Anderson, M. D.

The theses presented by Dr. Manghs in a paper on *The Method of Contagion in Syphilis*, read at a late meeting of the Society, contain views so opposed to the commonly accepted theories on this subject as to demand close investigation before their acceptance. I desire briefly to call the attention of the Society to some reflections on these propositions.

The first proposition is that "Secondary syphilis is communicable as secondary syphilis." This can only mean that the person contracting syphilis from secondary lesions merely continues the disease from the point or stage at which he becomes infected, omitting all previous or primary manifestations. This is the gist of the whole subject, and, if established, the other propositions may as well be taken for granted. But, if this is true, then is syphilis separated from all community or analogy with other contagious diseases and set in a solitary category of its own. In scarlatina, variola, vaccinia, and all other personally contagious diseases, it matters not whether infection occurs in the beginning, middle or end of their courses, the disease in the infected individual starts *ab initio*. All these diseases, however much they may differ in their manifestations, present a striking analogy in their mode of infection, period of incubation, primary fever, secondary eruptions, and by their eradication of the susceptibility to a second attack. Now, while syphilis differs from the others in the self-limiting feature, it is in exact similarity with them in other respects. In the vaccine disease it matters not whether the disease is taken from the new-formed vesicle or the dried scale, the result is the same; and so we would infer with syphilis, whatever be the stage of the infecting virus, the disease in the infected system must start *de novo*. Any clinical observation to the contrary must be more convincing than any yet displayed before this established analogy is overthrown.

By maintaining the necessity of the production of primary syphilis in every infection, we do not mean to uphold the doctrine that secondary syphilis is always preceded by a chancre. We do not consider the chancre as a necessary or constant feature of the disease. It only occurs, in our opinion, when the inoculatory virus has entered the system by a breach of continuity and not by absorption through natural channels. Since the location of the chancre is determined by the breach of continuity when there is no breach there may be no chancre. This brings us, temporarily, to a consideration of a part of the second proposition of Dr. Maughs—"that the accidents of syphilis are communicable without abrasion." We unhesitatingly indorse this, and it appears to us that the abrasionists (if we may so characterize those maintaining the necessity of an abrasion to infection), were forced at the last meeting to abandon their ground when they admitted that virus or remedies might be forced in

the circulation by brisk inunction or might enter it betwen epidermic cells swollen by moisture. If this mode of entrance presumes abrasion then are all the mucous membranes in a state of physiological abrasion and the difference one merely of terms.

The ability of the mucous membranes and the skin to absorb remedies is a matter of common observation, as witness the effects of liniments, plasters and baths. We know that thirst can be measureably abated by baths, and persons are frequently salivated by mercurial vapor baths. The rapid anæsthesia produced by the inhalation of chloroform, ether, or nitrous oxide, is an instance of the power of absorption possessed by the mucuous respiratory tract. Nausea is rapidly produced by the application of a damp tobacco leaf to the abdomen and the excretion of urine is quickly increased by a poultice of digitalis leaves. There is, therefore, no reason for doubting the absorbtion of the intangible, infinitisimal virus of disease through these structures.

As we remarked, when infection occurs through natural pas sages and without a wound there is no chancre. But this does not argue that there is no primary syphilis. We believe the vaccine disease may be produced without the vaccine sore, by absorption of the virus through the mucous membrane, and it is stated that this method of vaccination has been long practiced in China.

What is the chancre and what are its relations to syphilis ? It is not primary, because it is invàriably preceded by a period of incubation of from two weeks to three months, during which time changes are certainly occurring in the system preliminary to its manifestation. It is not properly a secondary lesion, as it is succeeded by a distinct period of latency before the acknowledged secondary manifestations occur. It is, as it were, only a sign or notice hung out by nature, indicating that there is syphilis going on within, just as we occasionally see a notice stuck on a house door, " Small-pox in this house." It is not necessarily incidental to the disease, and syphilis may and does run its course without it. But what I wish to establish is that its absence is no proof that primary syphilis in all its completeness and intensity does not exist.

But when after intentional inoculation or accidental inspection from secondary lesions, a sore does occur, this sore only ap-

pears after a period of incubation corresponding to the period of incubation before chancre, and it is always followed by a period of latency before the appearance of other lesions, just as the chancre is, and the sore so produced itself invariably presents all the essential characteristics of a chancre. We do not mean to maintain that it is entirely uninfluenced in its form by the source from which it came. Chancres are not all alike, but we mean to say that the sore thus produced in its previous and after history, and in its own main characteristics, is a chancre, and not a reproduction in kind of a later lesion. What are the essential characteristics of a chancre, those which distinguish it from other syphilitic lesions? They are briefly these: It is the earliest sore of syphilis, occurring at the point of inspection, preceded by a period of incubation and followed by a period of latency in the disease, presenting first a papule or tubercle, which generally ulcerates superficially, surrounded by well defined induration, movable upon the tissues beneath and attended by engorgement of the neighboring lymphatic ganglia. Now, does not this kind of a sore, or something essentially like it, occur after every secondary infection through an abrasion? This has been my observation, and we believe that, most of us. It is not necessary to go into a detail of cases. But whenever we have seen infection occur from secondary lesions, through an abrasion of surface and not by absorption without wound, the sore produced has been of the kind above described.

We have shown how the chancre may be absent. Perhaps none of the local manifestations of syphilis are necessarily constant. We know that by the use of mercury we can so modify the course of the affection that no secondary manifestation of the constitutional disease occurs at all, or so that only so-called tertiary lesions alternately appear. But these facts do not prove that the changes going on in the system, and which constitute essentially *the disease*, do not proceed from incubation to termination. From all these points of view, therefore, we may reasonably conclude that syphilis maintains its analogy with the other exanthematous diseases and does not permit of being engrafted ready-made upon a new subject without going through the primary stages necessary for its development in each, and that such a thing as the direct reproduction of secondary lesions in kind or in any other form is impossible.

The reply to the third theorem of Dr. Maughs, "that where

a local sore exists at the point of contact it is not a chancre," has been included in the remarks above made.

In contradistinction to the proposition of Dr. Maughs, it seems to us that those in which Bumstead summarizes his views on this subject and which are the result of a compilation of the views of various authors, mostly French, are nearer the facts, and accord more closely with reason and analogy. Bumstead does not admit, as we do, the production of syphilis without chancre. His conclusions are as follows:

1st. "The earliest symptom following secondary (as in cases of primary) contagion is a sore developed at the point where the virus entered the system."

2nd. "This sore is preceded by a period of incubation like an ordinary chancre."

3rd. "It is generally a papule, which in most cases becomes ulcerated and indurated, and is attended by engorgement of neighboring ganglia, and hence closely resembles a frequent form of ordinary chancre."

4th. "The period of incubation of general symptoms is nearly the same whether the disease is derived from a primary or secondary lesion."

5th. "The earliest general symptoms are of the same character after contagion from a secondary as from a primary source."

Perhaps the Doctor in thus boldly attempting to upset the universally accepted course of disease merely designed to stir up an interesting controversy for the entertainment of the Society. But such views, coming from such a source, whether seriously held or not, should be earnestly combatted, as otherwise those not informed of the design might be seriously misled.

Saturday Dec. 18th 1880.

A Wound or Abrasion of the Epidermis or Epithelium, the Door of Entrance for the Syphilitic Virus.
By Le Grand Atwood M. D.

Mr. President—Recently, before this Society there ensued an interesting discussion of the mode by which the syphilitic virus entered the organism. The ordinarily accepted doctrine that an abrasion or erosion of the cutaneous surface, or of the mucous membrane, was essential to its reception was advanced and the view combatted by those who asserted that the economy can be affected by the poison, "without the intervention of a wound or abrasion of the epithelium or cuticle."

To the establishment of the first of these propositions this paper is offered.

It may be held as an indisputable fact that, in order to establish the process of absorption it is essential that the material to be absorbed shall be in contact with an absorbent surface. Such surface must of necessity be provided with those anatomical elements, and endowed with those physiological properties, which make it possible for them to take up and transmit an absorbable substance from the periphery towards the centre of the body. This can be accomplished alone through the active intervention of the lymphatics and blood vessels, and since it is well known that the epidermis is endowed with not one of the ordinary elments of organization—has neither vessels, cellular tissue nor nerves, it is certain that it does not possess absorbent power and that it is simply impossible that it should take up any material, either noxious or innocuous. This tissue, protecting the absorbent dermis from harmful contact, "is formed of superimposed layers of cells, each one of which enjoys a life peculiar to itself and which originates from a production exhaled from the capillary blood vessels"—Henle. There is no organ of absorption on the surface of the skin: the lymphatics and venous net-work which ramifies through the sub-cutaneous areolar and adipose tissues, presents no expansion, no gaping orifice upon the tegumentary surface. Accordingly it would be as unscientific to assign absorbent properties to the nails or to

the enamel, as to declare it inherent in the epidermis or epithelium. The truth is, and the opponents of this view admit it, that in order to admit the entrance of either chancrous or chancroidal virus, through the cutaneous or mucous tissues it is absolutely essential that an abrasion or its equivalent in an altered condition of the external layer shall be present. It is not contended that the virus fails to enter through any solution of epidermis or epithelial continuity but stress is laid upon its supposed absorption upon an unbroken surface if only its presence be attended by "prolonged sojourn, moisture and pressure." But what is more likely to produce an exfoliation of epithelium or epidermis—a denuding of the dermis, than moisture and pressure, coupled with prolonged sojourn. Pressure implies a degree of friction while moisture, by capillary attraction swells and softens the epidermic cells. Prolonged sojourn gives rise to rancidity with corroding properties in pus or animal virus, and it would be surprising indeed, if under these conditions the external layer was not broken and a surface largely supplied with blood vessels, cellular tissue, lymphatics and nerves exposed for absorbent purposes.

Advocates of the theory that absorption takes place without the intervention of an abrasion lay particular stress upon the necessity of "prolonged sojourn," but they fail utterly to designate the duration of this local residence. But two efforts in this direction are of record and these were conducted by Cullerier. In these instances "chancroidal pus from the groin was deposited in the vagina, the latter showing no abrasion, and its secretions being inoculated with negative results. In one case the pus was left in the vagina thirty-five minutes, in the other nearly an hour. Finally some of the vaginal secretion was again collected and successfully auto-inoculated in both cases. The vagina was thoroughly washed out with an astringent solution and did not become ulcerated in either case, although the poisonous pus had remained for some time in contact with its wall."—Van Buren & Keyes. This is conclusive evidence that the virus failed to make its impression because no abrasion or erosion of the vaginal wall was present and that the poison did not sojourn long enough to produce an erosion.

Ricord remarks: "When virulent pus is deposited upon the sound integument, it does not produce immediate inoculation;

it must first open the way for itself by corroding the epidermis, after which it can alone exert its specific action."

Hammond states that: "In the management of syphilitic gonorrhea great care should be taken to avoid causing solution of continuity in any part of the tissue over which the discharge passes, or with which it may come in contact or a chancre may be the consequence,"

Van Buren & Keyes say: "That the syphilitic virus may make for itself a way through the tender epithelium of the mucous membrane, if left long enough in contact with it as does the poison of chancroid, has not been proved but from certain cases seems highly probable. It cannot get in through the epithelium of the skin without an abrasion of the latter."

Bumstead's views are even more positive. He writes: "In whicevehr mode communicated certain conditions are requisite for the poison to take effect. Its application to the sound integument, hardened by exposure and friction, is as innocuous as would be the deposit of vaccine virus upon the skin without previous puncture. The surgeon frequently soils his fingers with the secretion of chancroid and this with impunity so long as their surface is intact. Unless it gains access beneath the epidermis or epithelium, its effect is null; but as soon as this is accomplished like a seed it begins to germinate. Hence, one favorable condition for contagion to take place, is the pressence of an abrasion as is frequently occasioned by violence during coitus and through which the virus may penetrate. But no matter how the solution of continuity has been produced nor how large or minute its size—it may be a rent or tear, or the superficial ulceration underlying a herpetic viscle; it may be a chancre the initial lesion of syphilis, or a secondary symptom like a mucous patch—it affords a door of entrance sufficient for succesful inoculation. The door of entrance may be merely microscopic not visible to the naked eye, if it is only large enough to admit a single pus globule, it will serve the purpose of contagion."

There can be no doubt but that many persons escape infection, through impure sexual intercourse by reason of freedom from abrasions or erosions. Individuals frequently apply for remedies to harden the exposed mucous surface of the penis, justly alleging that every sexual act results in broken mucous membrane. Such persons are much more liable to venerial infection than are others disimilarly endowed. Hence as many

observers will testify, there are individuals who cannot indulge in impure connections without, almost invariably, acquiring some form of venerial disease, while others equally imprudent, as frequently escape.

It would seem that the testimony of the distinguished syphilographers quoted, aside from a study of the processes involved would prove sufficiently conclusive of the correctness of the views herein stated.

If a plaster of spanish flies be placed upon the sound epidermis and maintained there for several hours, there will ensue an inflammation, the result of the profoundly irritating properties belonging to the fly. As a consequence the epidermis is raised in a series of irregularly shaped blebs, filled with serosity from within, thus demonstrating the difficulty with which fluids pass through it and affording another argument that poisinous fluids are not absorbed through the unbroken cutaneous surface. But at points where the epidermis has been torn and removed and the absorbing net work of vessels, lymphathics and nerves exposed, the poison inherent in the spanish fly is absorbed, doubtless taken up by the vessels, and manifests its presence, remotely in the body by producing distressing vesical tenesmus and cystic muscular contraction termed strangury. This seems analogous with the action of syphilitic virus. Both poisons inflame the dermis and both affect the general system, the one temporarily, the other for an indifinite duration of time.

Many obstetricians have become infected, some with chancroidal, others with chancrous virus while making digital vaginal examinations, but in every instance the door of entrance for the poison has been an abrasion or erosion.

The virus of the cadaver, as is well known, is capable of poisoning the system of one exposed to its influence and its ordinary mode of entrance is through some solution of continuity upon the hand or finger, usually at an incision made by a desecting knife or the puncture of a needle.

The statements made by Paget, Erichsen, Bryant and others that the dissection poison may enter the system through the unbroken cuticle is to be taken *cum grano salis*, Even in Sir J. Paget's case reported by himself, in which he avers that the septic influence was absorbed through the unbroken cuticle of the hand immersed in the pyæmic pleuritic effusion, there is through accumulated observations and extensive personal exper-

ience, opportunity for grave doubt of the infallibility of his conviction. Of the many practical anatomists, constantly employed demonstrators and *post mortem* investigators here resident, there will not be found one to corroborate the views of these eminent surgeons named. They will regard "the sound external integument hardened by exposure and friction," as impervious to the poison of the macerating tub or the septic impression of puriform pleuritic effusion. And in the many instances of dissection poisoning, the relation of which could be elicited here and now, the assertion may be safely ventured, that in each case there would be an account of reception at an abrasion, an erosion, the cut or puncture of a knife or needle. Many investigators have immersed their hands in pyæmic pleuritic effusion for some time and experienced no ill effects but not one with a broken epidermis has been thus exposed without suffering serious consequences.

Great stress has been laid upon the rapidity and facility with which gonorrhocal conjunctivitis is induced by contact of virulent gonorrhœal matter with the ocular conjunctiva. So important has nature regarded the preservation of the visual organs from injury, that here she has distributed her most sensitive nerves in order through extraordinary sensibility to warn of danger from extraneous sources and consequently nowhere else in the organism do we find so thin and delicate an epithelial layer. As even this investing covering is not endowed with nerves or vessels, its extreme tenuity is made manifest by the rapidity with which the cognizance of foreign bodies is taken and correspondingly with the superficiality of the sentient extremities of its nerve supply are its absorbent vessels. It is therefore not at all remarkable that inflammatory products or irritating substances of any description should so quickly induce conjunctivitis, still less is it surprising that the corroding virus of gonorrhœa should so rapidly destroy the delicate epithelial cells and excite specific inflammation.

Secretions natural to a part, if retained become under the, combined influence of heat and moisture, with prolonged sojourn, both rancid and acrid, corroding the surface of their origin and establishing a gate-way for the reception of zymotic material. Thus the smegma, which unless cleanliness is observed accumulates in the balano-preputial sulcus often by its ran-

cidity abrades and erodes the mucous surface of the vicinity, and in this manner locates the point of entrance for chancroid and chancroidal poison.

It would be possible to discuss this subject at greater length, but enough has been said to establish the proposition that the syphilitic virus cannot invade the system "through the unbroken epidermis hardened as it is by exposure and friction" nor through the epithelium till by "prolonged sojourn" with moisture, the cells are eroded and a channel of communication established with the absorbent surface of the membrane.

MADISON COUNTY MEDICAL SOCIETY.

EDWARDSVILLE, ILL., JULY 30TH 1880.

The Madison County Medical Society met in this place on the 27th ult., and enjoyed the most profitable conference since its organization. The attendance was large, and included Dr. Rumbold, of St. Louis, Editor of the ST. LOUIS MEDICAL AND SURGICAL JOURNAL.

Minutes of previous meeting, read and approved. The Committee on revision of Constitution and By-laws reported progress, and on motion of Dr. Yerkes was given until next Annual Meeting to complete their work, meantime suggestions from members are solicited. Dr. Rumbold, of St. Louis, then read an able and instructive paper on *Nasal Catarrh* which he illustrated with Anatomical Charts—showing the seat of disturbance and exhibited instruments which, as a specialist in Catarrhal affections of the naso-pharyngeal organs, he has proven perfectly adapted to their treatment.

The Doctor emphasized as most prominent among the causes of catarrh, and as conducing to its incurable condition, the persistent use of tobacco. He pronounced it the most pernicious of poisons, assuaging only the torments it tends to produce, and entails only debility and physical derangement, local and general. Other causes of catarrh mentioned are fashionable follies and insufficiency of clothing and consequent exposure to cold, especially with females. His therapeutics included cleanliness, protection from vicissitudes of temperature, temperance in all things, which would seem to inculcate a strictly religious life. In short, his treatment for catarrh is hygienic and medicinal, constitutional and local. Dr. Armstrong then read a paper on Croup, differentiating mainly that affection or pseudo-membranous croup from certain spasmodic and catarrhal conditions of the air-passages often mistaken for true croup, which paper elicited much discussion and a vote of thanks.

A telegram was received from Dr. E. Gulick announcing his inability to be present expressing regret, and asking that time

on his paper on Anæmia be extended until next meeting, Dr Yerkes stated, that Dr. Gulick had given the subject much attention, and that his paper would be able and worthy, and moved that Dr. Gulick be allowed to read his paper whenever it suited his convenience, which motion prevailed. At the suggestion of the President Dr. Spalding submitted to the Society, the idea of establishing a Bureau of Statistics, and remarked that there is not historical nor statistical data published nor accesible in Madison County, whereof any thing may be known of its past medical history, of the diseases most prevalent, or of the meteorological or climatic conditions that may be supposed to effect, modify or produce disease, and moved that the Chair appoint a Committee of one or more members from each town in the County on Meteorology, and the State of Disease who shall conduct observations under the rules that obtain in the U. S. Signal Service, which motion was adopted, and the Chair appointed, as such County, Dr. S. E. Bucknell, of Alhambra; Drs. Gulick and Gibson, of Alton; Drs. Powell and Oatman, of Collinsville; Drs. Armstrong and Fiegenbaum, of Edwardsville; Drs. Knoeble and Walliser, of Highland; Dr. Sabin, of Troy; Dr. Miller, of St. Jacobs; Dr. Lemen, of Upper Alton; Dr. Wiedman, of Marine; Dr. Reed, of Bethalto; Dr. Gere, of Moro; Dr. Irish, of Nameoki; Dr. Sharp, of New Douglas; Dr.———, of Venice; Dr. Dorr, of Wordon and Dr.———, of north Alton, to which Committee the Chair volunteered his services, and the use of his instruments which the Society accepted with a vote of thanks. A motion by Dr. Bucknell obtained that the Chair appoint a Committee of three on programme for the year, who shall appoint and announce at each meeting essayists and their subjects so that the Society may have time to consider the several subjects and be the better prepared to make observations.

Accordingly the Chair appointed as such Committee, Drs. T. P. Yerkes, E. C. Lemen and S. E. Bucknell who reported as essayists for next meeting: Dr. Fiegenbaum subject—"Plaster of Paris Splints."

Dr. E. W. Reed's subject: "Physiological Basis of Education and Dr. F. S. Halsey's subject: "Animal Heat."

Dr. Powell, of Collinsville announced the presence of typho-malarial fever in that city, and found by inquiring that it existed there exclusively—the rest of the County being quite free

from disease of any kind which suggested some local causation.

In discussion the treatment of typho-malarial fever, Dr. Yerkes, of Upper Alton, said: In the treatment of typho-malarial fever, as it occurs in our community, the first great object of the physician should be to ward off the danger resulting from the intense fever heat. Nearly all who succumb to this disease die either directly or indirectly from the intensity of the fever. The real danger, therefore, consists in the deleterious influence of a high temperature on the tissues by means of which degeneration of the same is accomplished, manifesting itself most generally in paralysis of the heart. Our object should be to endeavor to prevent this dangerous consequence by treating the fever before the danger manifests itself. To accomplish this we fortunately have a most efficient remedy in water, applied as circumstances may indicate, either tepid, cool or cold. With this remedy we are enabled to lower the abnormal temperature of the body by the energetic withdrawal of its heat.

Several plans are available in its application, either by sponging, packing or the bath. Whenever the thermometer indicates a temperature of 104° or 105° I invariably resort to the cool pack, especially if there are present well marked cerebral symptoms. My plan in applying the pack to patients who are unable, because of delerium or stupor to manifest any feeling as to its effect, and in order to avoid shock to the system, I invariably make the first application with warm water at a temperature of about 90°. In water of that temperature I wring out a sheet and apply it directly to the surface of the body. The sheet is then gradually wet with water of lower temperature until the desired effect is obtained, which will soon be indicated by a lowering of the mercury from 1° to 3° in the course of thirty minutes to one hour. At the expiration of that time the nervous symptoms are allayed, the patient resting quietly and will generally complain of feeling cold; the patient is then removed from the pack and placed in warm, dry blankets. If in the course of a few hours the temperature again begins to rise, when the thermometer placed in the axilla, the same process is repeated. It may be necessary to give as many as three to eight packs in the course of twenty-four hours. During the application of the water other treatment is continued, such as nourishment, stimulants, if indicated, with antipyretic doses of quinine. Since I have adopted

the treatment of these cases, as aboved described, I have not had the misfortune to lose a case of typho-malarial fever.

Dr. Pearce, of Alhambra, assenting to Dr. Yerkes' views in the use of "the cold pack" from much experience, declared it effectual in lowering the temperature. Dr. Bucknell, of Greencastle, entered a philosophical dissent, claiming it unsafe, as a rule, to depart from nature's process of lowering animal heat, which was by the evaporation of perspiration. He regarded the cold pack as successful only as it excited the sweat centers to increased acand tion, effected a reduction of fever heat by its evaporation Dr. Powell denied that copious prespiration would always reduce temperature; had seen high fever heat and copious perspiration coëxist, which Dr. Bucknell argued learnedly, and at length to prove unphilosophical. The opinion obtained that such conditions are exceptional and usually the result of inflammation rather than essential fever. The advocates of the cold pack process of treating essential fevers are controlled in its application and continuance by the degree of temperature of the body and blood, as indicated by the use of the fever thermometer. Upon this point Dr. Lemen, of Upper Alton, made the following remarks:

In fever patients the danger increases in direct ratio to the increase of temperature. Temperature of 102° to 105° indicates severity of disease. Above 105° death is almost certain to follow. Temperature of 106° to 108° produces death of the blood cells, the cells ceasing to act as oxygen carriers, and in consequence the blood becomes exceedingly dark and venous. The physiological therapeutics of the cold pack consists in keeping the temperature of the body blood below the point at which necraemia is likely to occur. I have never seen any other than the most favorable results follow the judicious use of the cold pack. I have used it in typho-malarial and in scarlet fevers with happy results.

Responsive to Drs. Lemen, Lukes and Powell's observations, Dr. Bucknell, of Greencastle, said:

MR. PRESIDENT AND GENTLEMEN: —

I feel that it is presumptuous in me to differ with a majority of the members of this Society; yet, I cannot conscientiously advocate the use of the *cold pack*, since I believe its use to be unphilosophical and detrimental to the patient. It is, I believe, generally conceded that fever is occasioned *not* by the *increased*

production of heat, but by the *abnormal shutting in* of heat, or, in other words, fever is merely a symptom, indicating a diseased condition of the organs of secretion, whereby that function is greatly diminished or entirely arrested. This story of fever has been corroborated and sustained by the recent experiments of Drs. Walton and Witherle. (See article on ætiology of fever in Boston *Med. and Surg. Journal* for June 10, 1880.)

Abnormal stimulation or irritation of the vasomotor nerve centers results in the contraction of the capillaries of the skin, and hence the process of secretion and surface evaporation is greatly diminished if not entirely suspended. Now, by relieving this nervous irritation, we promote secretion and assist *nature* to accomplish her own work in her own way. By the application of the cold pack we contract the capillaries of the surface and drive the hot blood to the internal viscera, and while we may reduce the *external* temperature *temporarily* we actually increase or elevate the temperature of the internal organs. The actual amount of heat abstracted by the cold pack is also much less than that abstracted by evaporation. Suppose, by way of illustration, that the amount of heat lost by the body through the instrumentality of the cold pack is sufficient to raise sixteen ounces of water thirty degrees or 480 ounces one degree, and this by the way is decidedly more than can ordinarily be accomplished by this manner; yet, the evaporation of a single ounce of perspiration is sufficient to deprive the body of enough heat to raise five hundred and forty ounces of water one degree. In the former case the hot blood is driven to the internal viscera by the sudden contraction of the capillaries of the surface. In the latter case the hot blood comes to the surface and is deprived of part of its heat and returns to the internal or *vital* organs in a more *normal condition*, and *this* process of heat elimination is *continuous*. The gentleman who has just spoken (Dr. Yerkes) states that he would give more for half a dozen *practical results* than for all the *theories* in the world. I would say that the same argument has been used to defend the practice of salivation and venesection, and is to-day used by our homœopathic brethren to advocate and defend their absurd dogmas. So far as I am concerned, I will never advocate or adopt a practice which I believe to be irrational, all *practical results to the contrary notwithstanding.*

EDWARDSVILLE, ILL., Nov. 23, '80.

The Madison County Medical Society met in this place on the 26th, but owing to all pervading political excitement, there were only eight or ten members present. President Wadsworth called the meeting to order when the Secretary read the minutes of previous meeting, which were approved. Dr. Reed and Dr. Powell's letters of regret read and accepted. Dr. Bucknell reported appointments for next meeting, Drs. Ried, Wiedman and Pearce. The President remarked on the prevalence of typho-rmalarial fever, which has prevailed the past season in Collinsville extensively, and has found the antipyretic doses of quinine to be as effectual in ten grains as in thirty, forty or sixty grain doses. He has found the use of iodine to possess manifest antiperiodic properties; has formulated an elixir of tinct. iodine, which is potent and pleasant.

Responsive to an inquiry as to a remedy for chronic malaria manifesting itself in third-day chills Dr. Spalding said: For ten years past I have treated chronic malaria in all its forms with perfect confidence and success, and while I regard quinia as a specific for malaria, experience has proved it is not such for the manifold morbid conditions or innutritions resulting from long continued malarial poison; hence, quinine alone will not relieve the enlarged spleen and liver and the general emaciation and debility of which we find these chronic cases possessed. I have, therefore, in all these cases considered the condition of the digestive organs and incorporated with quinia agents best calculated to invigorate the functional activities of these organs. To this end I have employed, with almost invariable success, the following:

℞ Quiniæ Sulphat.....3ivss
Strychniæ " .....grs. iii
Arsenious Acid.....grs. iii
Feri Lactas.....3iss
Ol. Pipr. Niger.....gtt. xxx
Ext. Gentian.....q. s.

M. in mass. et pillulae dividend. No. 90.

Sig. One pill three times daily immediately before meals.

It will be seen that the patient receives 9 grs. quinia daily for thirty days together with stimulants and restoratives, but the *time* which the remedy is continued is of prime importance,

reaching over four seven-days periodical returns, and meanwhile so building up the system as to cause active absorption from congested spleen and liver and the elimination of latent poison. I commend the above as approximating as nearly a specific as will probably ever be found in therapeutics.

Dr. Buckwell remarked that Dr. Spalding had given him this plan of treating chronic malaria and its sequelæ, and for several years past he had also entirely cured almost every case of the kind, however obstinate, some having existed for two and three years, and he had failed in no instance where the pills had been taken for thirty days three times a day.

Dr. Halsey then read the following paper on Animal Heat:

Mr. President and Gentlemen of the Society:

In bringing before you to-day the subject of animal heat, I shall merely present as briefly as possible some of the facts and conclusions now accepted by the profession without attempting to enter into the details of experiments on which they are based. Therefore, leaving to the Society the discussion of conflicting theories of the past, I arrange these facts and conclusions in answer to the following queries, which naturally arise in the consideration of this subject:

What is the source of animal heat?

Where is it generated in the system?

How is it regulated in degree?

What is the normal temperature, and what are some of its physiological variations?

The source of Animal Heat is one in the chemico-vital changes which constitute nutrition and bears close relation to the appropriation of oxygen and the formation of carbonic acid. This of all nutritive acts is most constant and immediately necessary to existence. But, as in the world around us, chemical changes other than oxidation are productive of heat. So in all the varied phases of assimilation and disintegration we may find factors of carbonification exclusively with the consumption of any single class of principles or with any single one of the acts of nutrition.

So, also, the generation of Animal Heat is limited to no particular organ or tissue of the body.

We no longer attempt to locate a furnace within the system. Since the forces of nutrition are in operation in all parts of the

living organism every part of necessity produces heat — the amount depending on the activity of these forces.

For example, muscles have been found more productive of heat than loose cellular tissue. This is easily accounted for by the rapidity of the waste and repair of muscular tissue as compared to the cellular tissue which we say is less highly organized. But no great disparity of temperature exists between the different parts of our organism since the active and free circulalation of the blood through the blood vessels tends to equalize the warmth of all the tissues which they pervade. There are certain slight variations, which I will notice further on.

Aside from external influences it is plain that the temperature of a man's body will depend not only on the amount of heat generated within him by changes both physiological and pathological, but also upon the amount of heat eliminated in the perspiration, breath and other channels of excrêtion. In health the ratio between production and elimination is such as to maintain a definite and fixed degree of temperature, while in fevers and inflammations we find more or less exaltation of temperature due not only to increased production, the result of pathological changes in the tissues, but also to a derangement or failure of some of the excretions, or, as we generally say, a checking of the secretions.

The evaporation of the perspiration is undoubtedly Nature's chief method of abstracting heat from the body depending on the principle that in the conversion of solids into liquids or of liquids into gases heat is rendered latent or imperceptible. Without discussing the relative importance of the other excretions in preventing an undue accumulation of heat in the system it will suffice to say that these united agencies keep the normal temperature, as shown by the thermometer in the axilla or under the tongue, at about 98.5° Fahrenheit.

It has been proven that this superficial temperature undergoes regular diurnal variations of from 1° to 2.16° F., the maximum being reaching at 11 o'clock A. M. and P. M., the minimum at night whether sleeping or not. Active exercise will occasion a transient elevation of 1° to 2° above normal. It has also been shown that external influences, such as exposure to extreme cold or heat may occasion considerable temporary variations; 83° and 107° F. are the extreme limits that have been reached by such experimentation. But, of course, these figures

apply only to superficial parts. The temperature of blood in the internal vessels also varies, but being removed from the direct effects of evaporation and external influences is on the whole higher in degree. That in the hepatic veins has been proven the warmest in the body. This can be accounted for on anatomical grounds, for this blood, most of it, since leaving the heart has passed through two sets of capillaries, and therefore has heen subjected to greater changes than is the case elsewhere.

Other interesting facts might be cited, but with this brief and hasty review, I leave the subject in the hands of the Society.

Dr. Bucknell's Remarks on Dr. Halsey's Paper on the Subject of Animal Heat.

MR. PRESIDENT—The paper just read treats of an exceedingly interesting subject; one deserving of our most careful and thoughtful consideration. In this paper the writer uses the word caloric to designate heat and uses other language in speaking of its production or generation which leads us to infer, that he regards heat us a material substance, and in this respect, he is not alone, for the language of many educated and professional men, and even the phrascology of some of our text-books would seem to indicate that this was the accepted theory. We know that this is a mistake. The labors of Bacon, Rumford, Mayer, Joule, Helmholtz, Davy, Faraday, Tyndall and others have demonstrated beyond all possibility of controversy, that there exists no such thing as an igneous fluid but that heat is motion.

It has been shown that there exists no such thing as an absolute solid. Every substance consists of an infinite number of infinitely small particles or atoms, which even in substances of the greatest density are separated by distances many times greater than their own diameter. All bodies may exist either in the solid liquid or gaseous state. These changes of form are occasioned by the approximation or separation of these primitive atoms. Heat is simply the vibratory motion of these elementary atoms. Oxidation is merely the union of an atom of oxygen, with the atom of some other body and when this union occurs, the atoms approach each other with such inconceivable velocity, as to occasion an intense vibration of the compound

atom. In the animal economy every atom is in continual motion, and this continued atomic or molecular motion is animal heat and any cause, of whatever nature, which will increase this atomic motion will result in elevating the animal temperature; and, whatever impedes or arrests this motion will induce the animal heat. Molecular motion and mechanical motion are interconvertible! But molecular motion is *always the source* of mechanical motion and the *sun* is the source of all molecular motion. In reference to this subject an able writer has said:

"Presented rightly to the mind the discoveries and generalizations of modern science constitute a poem more sublime than has ever yet addressed the human imagination. The natural philosopher may dwell among the conceptions which may beggar those of Milton. Look at the interrogated energies of our world; the stored power of our coal fields, our winds and waters, our fleets, armies and guns. What are they? They are all generated by a portion of the sun's energy which does not amount to $\frac{1}{2\,300\,000\,000}$ of the whole. Multiplying all our powers by millions we do not reach the suns expenditure. And still notwithstanding this enormous drain, in the lapse of human history we are unable to detect a diminution of his store.

A Case of Sodomy, by William Dickinson M. D., of St. Louis.

This is a crime, which however frequently committed, is rarely brought to the knowledge of the public.

On Oct. 15th John Jones, a street gamin of thirteen years of age, partly by persuasion and partly by constraint was by James Smith a young man of eighteen years of age, known to the police as an abandond character, conducted to a deserted building in a remote part of the city of Hannibal Mo., and there by the latter, compelled to submit to the perpetration of the crime of sodomy. John states, that suspecting the intention of foul play, he attempted to escape, but was prevented by the greater strength of his companion and when he shouted for help, his cries were stifled by the hands of Smith placed forcibly over his mouth and other forms of violence threatened. Having reached the place designated Smith tied the hands of Jones and compelled him, in a stooping posture, to submit for "ten minutes" to the gratification of his beastly lust, causing him meanwhile extreme pain.

Being released he found his way to the crowded streets of the city, crying in consequence of the extreme pain experienced. In this condition he was found by a police officer, and by him conducted to the office of Drs. Herne & Hays. At first he was very reticent as to the cause of his crying and suffering; but his fears being allayed, he stated that "Smith had done with him as he had a mind to." An inspection discovered a considerable quantity of blood about the anus and the portion of the nates adjacent; and a digital examination revealed paralysis of the external sphincter, the fæces readily escaping; and a torn condition of the mucous membrane to a considerable extent from the tension or violence to which the rectum had been subjected during the forced and unnatural congress.

Smith was immediately arrested upon this information; and when charged with the crime according to the allegations of the boy Jones, he denied nothing. He subsequently, before the Recorder's Court confessed his guilt; and being unable to procure bail he was committed to the county jail awaiting trial.

T. B. SPALDING, M. D., Secretary.

Periscope.

CONTINUED TOLERATION OF FOREIGN BODIES WITHIN THE EYE-BALL FOR FIFTEEN AND TWENTY-TWO YEARS.—Dr. HENRY W. WILLIAMS gives the record of the two following cases in the *Boston Med. and Surg. Journal* :

CASE 1. December 15, 1880, I saw in another city Mr. ——, aged thirty. He had consulted me fifteen years before on account of a bit of gun-cap, which had penetrated his left eye some short time previously, passing through the cornea and iris, and probably through the margin of the lens, to lodge at the deeper parts of the eye. A cicatrix in the cornea near its centre, and a hole through the iris towards its inner part, indicated the direction which the foreign body had taken ; but it could not be seen on account of haziness of the crystalline lens. As the eye was then quiet, and free from injection and sensitiveness to touch, I advised no immediate interference ; but that the eye should be carefully watched and shown to me at once in case of the manifestation of any active symptoms.

Two years since he came to me with slight vesication of the cornea of this eye which yielded readily to treatment.

At present the eye has no perception of light. The pupil is of normal size, and shows behind its lower two thirds a shrunken, cataractous lens ; the upper third of its field being clear. Dilatation by atropia does not enable the foreign body to be seen. The perforation in the iris behind the corneal scar is still visible, as when the eye was first seen, fifteen years previously. Below the cornea there was a large bulging of the sclera, which pushed the lower lid outward. The projection had a very dark color, was not translucent when examined with oblique illumination, and the conjunctival vessels over its surface much enlarged, so that it had been thought possible that a melanotic or other intra-ocular tumor existed. The mass, however, was easily indented by pressure with a probe ; there was no general injection of the globe or vascularity or tenderness of the ciliary region ; no tension of the eyeball, and no pain. I there-

fore regarded the change as a staphylomatous thinning of the sclera.

The case required an operation for the relief of the steadily increasing deformity; the large extent of the staphyloma and the undoubted presence of a foreign body indicating enucleation rather than excision of a part of the globe. After the preliminary dissecting up of the conjunctiva to spare as much of this as possible, the thinned sclera gave way during the division of the recti-muscles, allowing escape of the vitreous, which had become completely fluid; and in the removal of the collapsed globe the bit of copper was probably sponged away with the blood. It was not within the shrunken lens, nor was it encapsulated at the fundus, as is sometimes the case.

Case II. Two weeks after the above, I saw J. H. W., aged thirty, whose right eye was penetrated by a bit of gun-cap exploded near him by his brother, twenty-two years since, when he was only eight years old. The eye soon recovered, and remained quiet, with, as he says considerable vision, until last spring, when he began to have pain and injection of the eye, which continued four months. These symptoms subsided, and he had visions as before until within six weeks, since which time he has had agonizing pain in the circumorbital regions. I found the globe much injected and very sensitive to touch. There was a linear scar near the lower border of the cornea, and a little to the temporal side of this cicatrix there was a hole through the iris, not far from the outer edge. A yellowish reflex, deep in the eye, could be seen through the pupil. No perception of light.

Optico-ciliary neurotomy might have been done, with hope of relief and the prevention of sympathic inflammation of the other eye, if the patient could have remained under observation; but as he was obliged to return immediately to his home in Maine, enucleation was performed. The foreign body was found in the fundus, near the antero-posterior axis of the globe, enveloped in the yellowish mass of limited extent, which had previously been seen through the pupil, a process of suppurative softening having evidently begun in the inclosing material. The relief from pain was immediate, and the patient returned home two days later.

PROPHYLACTIC VALUE OF EXCISION OF THE SYPHILITIC INITIAL SCLEROSIS.—In the *Annales de Dermat. et de Syph.* Dr. J. Chadzynski gives an historical account of the operation together with a table of the results obtained by different operations, and adds to this a tabular statement of thirty cases coming under his own care. The cases were somewhat recent: 4, 6, 8, 10, 11, 18 and 19 days. In four the induration returned and excision was again performed. Seven cases were doubtful, six did not report, one was still under observation after two months, sixteen were unsuccessful and seven were not followed by general symptoms, two after six months, three after seven months, one after thirteen months and one after twenty-four months observation. One successful case occured in a recurrent induration.

CRÉDÉ'S METHOD.—Dr. Jno. W. Snowden gives the following as Dr. Goodel's views on the subject:

At the meeting of the Philadelphia County Medical Society held October 13, during the discussion on a paper entitled "Hemorrhage incident to Parturition," Professsor Goodell, in allusion to Crèdè's method of delivering the placenta, said he did not believe this plan had ever been practiced by Dr. Atlee or by any one else before it was devised and recommended by Crèdè—at least such a plan had never been described or published by any other physician.

I know that Dr. Warrington taught this method in 1843 and 1844, as I was a pupil of his "Obstretic Institute" for one year, and was his assistant for a short time before I left Philadelphia.

I have heard him make use of the very same expression as Professor Goodell. He would tell his class to "grasp the uterous in such a way as to squeeze the placenta out, as you would force the stone out of a cherry."—[*Phila. Med. Times.*

AN UNUSUAL CASE OF INCONTINENCE OF URINE.—Prof. A. J. C. Skene. Female, æt. 49, married 25 years, sterile. Had pelvic cellulitis 20 years ago under the care of Sir James Y. Simpson. For several years was compelled to urinate frequently at night. Following this occurred nocturnal enuresis, associated with dreaming of the act. Now urinates several times during day, but has complete incontinence at night; this latter condition has existed for past 3 years. Physical examination reveals roof of pelvis indurated with products of old cellular inflammation; retrocession of uterus and bladder, both being bound to the

sacrum by adhesions; inability to evacuate the bladder completely; large amount of residual urine containing mucous, pus and some blood remaining in bladder. Treatment: Local applications to the vesicel mucous membrane; evacuating bladder by catheter late at night, which relieved the incontinence. [*Annals Anat. and Surgery.*

HERPES GESTATIONIS.—In the *Lancet* H. S. Gale writes that he was struck by the resemblance of this rare disease to "recurring pemphigus." He subjected two cases to the same plan of treatment as employed in the latter affection. In both cases a cure followed. The internal treatment was based upon general principles—quinia in three grain doses, iron and cod-liver oil if necessary. The local treatment consisted in pricking the blebs, turning back the "skin," and freely rubbing the spots with lunar caustic, a procedure which caused a considerable amount of pain. The author has but little doubt that herpes gestationis, pemphigus and hydroa depend upon some affection of the nervious system. All are accompanied by pain and nervous disturbance and more or less benefited by nervines and nerve tonics.

EXTENSIVE VENEREAL WARTS.—Dr. H. T. Machell writes to the *Canadian Journ. Med. Science:*

On the 1st of December last a patient presented herself, saying she had "the chancres." The history of the case, however, pointed to gonorrhœa, which she said she had contracted six months ago. On making an examination, the whole circumference of the vagina, from the labia minora backwards for an inch and a half, was completely studded with venereal warts, while above this these growths were scattered here and there up to within a few lines of the cervix uteri. These vegetations so packed the anterior portion of the vagina that when the labia were separated the direction of the canal could not be made out at all, and it was with considerable difficulty that the finger could be introduced.

They varied in size from a pin's head to that of a good-sized pea, but the greater number of them were flat and smooth, and frequently three or four could be seen attached to one pedicle.

Nitric acid was applied a few times at intervals of three days; then the remainder were clipped off with the scissors at a couple of sittings, and the acid applied to the base of the pedicles. Result good.

ETIOLOGY AND HISTORY OF LEPROSY.—In the *Edin. Med. Jour.* Munroe concludes his series of papers upon the etiology of leprosy with one treating of symptoms, diagnosis, age of attack, duration and sex, prognosis and treatment.

Symptoms.—Tuberculate form dark blotches on skin of body, face and limbs (extensor aspects), or maculæ; then tubercles upon the face, cheeks, eyebrows, and lobes of the ear; hands and feet swell. The skin becomes bronzed and anæsthetic, eyebrows are lost, eyes inflame, voice is raucous, tubercles ulcerate, and the patient may die of exhaustion with dysentery. The non-tuberculate form begins as red macules, which spread, turn pale, and glisten, are without scales, depressed and anæsthetic in centre, may appear and disappear with months intervening; then come pemphigus on the palmar aspect of the fingers and toes, with contraction, wasting of palmar muscles, dry caries of the phalanges, with gradual disappearance of the whole digit, leaving sometimes the nails upon the knuckles The skin of body dry and harsh, sometimes analgesic and anæsthetic. Orbicularis oculi may be paralyzed. Nose may sink in. In both varieties the lymphatics are swollen, often painfully.

Diagnose from syphilis, from elephantiasis (Barbadoes leg), and from leucoderma, this last showing a papery whiteness of the skin, with sensation retained.

Age.—Age of death at St. Kitts for 105 lepers averaged 30 years, eldest, 70 years old; the youngest, 6½ years. Average rate of mortality 7½ per cent annually, being two and a half times that of the population generally, and four times that of the population over 5 years. Of living lepers the ages were: Tuberculate, 34 cases; average age, 22¾ years; oldest, 50 years; youngest, 6 years. Non-tuberculate, 37 cases; average age, 39 years; oldest, 65 years; youngest, 14 years.

Sex.—The sex in 1817 of 94 lepers at St. Kitts was 60 females, 34 males. Subsequent records give death of 44 males and 34 females. In 1872, of 72 lepers on the island, 33 were males and 39 females. Probably there is no special liability of either sex to the disease, all depending upon the circumstances of life under which they live.

Pathology.—The exudation and deposit of albuminoid matter in the sub-cutaneous tissue in the tuberculate, and in the interfibrillar spaces in the non-tuberculate, form of leprosy consists of small, nucleated, round cells, crowded together (Carter), and of spindle shaped elements (Virchow). These by pressure destroy the surrounding tissue.

Prognosis.—Always bad, only a few cases of possible cure being reported.

Treatment.—Arsenic has sometimes been useful. Beauperthuy's treatment, local destruction of the tubercles by cashew-nut oil, etc., is now out of date. Chaulmoogra oil with good diet and hygiene, may cause (Carter) the nodules to subside, the sensory nerves more or less regain their functions. It does not prevent exacerbations, and interferes with the action of the virus rather than destroys it. Gurjon oil one part, lime-water three parts, externally, and internally fifteen grammes of the same, twice daily, seem to give the best results. The body is washed, and then for two hours, twice a day, the mixture is rubbed in. The oil is laxative and diuretic, not caustic. Good diet and cleanliness, change of climate, segregation.

Cause.—Munroe thinks that lack of salt and of a meat diet, owing to the Brahmanic religion, are among the causes of leprosy. It is not absolutely hereditary.—[*Arch. of Dermat.*

LABUS ON THE INFLUENCE OF RELAXATION OF THE UVULA ON THE VOICE. The following observations from the abstract of a paper read at the First International Congress of Larygology, held lately at Milan, by Dr. Carlo Labus, President of the Congress etc., and are the result of experience derived from many years' practice in that city, which may well be considered as the centre of the operatic world. Dr. Labus has had the oppertunity of examining the vocal organs of an unusually large number of singers, and of observing the affections that produce a change in the voice. From statistics given in another paper on the question of chronic laryngitis as affecting singers, and published last June, it appears that Dr. Labus has taken notes of the cases of 1,132 singers who have applied to him for treatment, and it is interesting to note the classification of their voices.

Soprani, mezzo-soprani, and contralti	(females)		563	
Tenors	(males)	- - -	309	569
Baritones and basses	(males)	- - -	260	569

Dr. Labus finds that relaxation of the uvula is a by no means unusual cause of impaired voice, and considers that it deserves a greater degree of attention than it has so far received, and especially because it is often overlooked. Disorder of phonation from this cause is due not so much to elongation of the uvula as the difficulty which, on account of its relaxed condition, the subject experiences in making various necessary movements of the soft palate during the formation of different sounds. He has observed that the uvula remains pendant in the chest-notes, becomes slightly contracted in the mixed voice, and finally in the treble notes becomes entirely straightened, swinging upwards and backwards so as to take a horizontal position, and to close more or less the naso-pharyngeal cavity.

Believing with Helmholtz that the cavity of the upper throat is a resonator, it follows, in his opinion, that all modifications in the conformations of the phyryngo-naso-buccal cavity must influence the harmonic tones, and consequently the quality and fullness of sound. Nothing is easier to understand than that the uvula, situated as it is at the point of union of these three cavities when once relaxed, no longer permits them to assume the wished-for conformation.

Singers suffering from an unduly relaxed uvula, complain that the voice has lost in strength, and become hollow and thin; of inability to preserve an even coloring during emission of certain notes in the middle and upper registers; of inability to sing any longer on the open Italian vowel *a* (*ah*), being obliged to substitute the sounds of *e* or *u* (*eh* or *oo*); of necessity for 'forcing' the voice, which produces falseness, with fatigue and pain (due to exaggerated or supplementary muscular exertions), facial grimaces, and finally a vocal *tremolo*, eminently disagreeable to the ear.

Relaxation of the uvula is of two kinds, of which infiltration and hypertrophy of the submucous tissue is the kind most commonly seen, accompanied not unfrequently by hypertrophy of the azygos muscle; the second kind is due to paresis or even complete paralysis of the same muscle. It is this last-named form which often escapes observation, for the uvula is apparently in a normal condition, and the laryngoscopic mirror applied to discover lower down the voice-defect, conceals the fact that the uvula remains immobile during production of the emitted notes.

Amongst exciting causes must be noted the diffusion of a

coryza, irritations produced by alcoholic drinks, and particularly by tobacco, weeping, singing from the throat, and abuse of the *timbré sombrè*.

From his experience, Dr. Labus believes only in a radical cure, namely, that of removal of so much of the relaxed uvula as is deemed necessary, according to the varying condition of each patient. In no case should the ablation be entire, but merely sufficient to restore to the resonating portion of the organ its normal volume and form. He has performed many of these operations, and has *never observed a deterioration of the voice*, but on the contrary his patients have almost invariably assured him of an amelioration.—[*London Med. Record.*

COMPOUND LICORICE POWDER.—As this laxative powder, under the name *Pulvis glycyrrhizæ compositus*, has come into popular use of late years, being imported, so to speak, from the German Pharmacopœia, it may be interesting to the practitioner to know that it is not by any means perfect in its composition. It occasionally has a tendency to gripe, and, we think, should contain a larger amount of fennel. The following is its formula:—

℞. Glycyrrhizæ pulv.,
Sennæ pulv..... .....aaʒij
Sulphuris loti,
Fœniculi pulv,.....aaʒj
Sacchari albi,..... .....ʒvj. M.

A recent writer in the Philadelphia *Medical Times*, Dr. E. T. Blackwell makes the following comments upon it:—"This prescription is faulty, not only in that it is weak in laxative power, but because of the very great amount of sugar, which increases fermentation in sour stomachs, rendering it very objectionable in many cases. The following scheme, in which the remedial drugs occupy the leading place, and the corrigents and demulcents their appropriate relation and amount, I propose with the name of *Pulvis sennæ compositus*, as a substitute for the forementioned:

℞ Sennæ pulv.,
Sulphuris loti,
Sacchari albi,.....aaʒss
Fœniculi pulv.,
Glycyrrhizæ pulv,.....aaʒij. M.

No one will question I think, the improvement in bringing the quantity of sulphur to equal that of the senna, which it so much surpasses as a laxative; nor does it prove less acceptable to the taste, while it is better tolerated by the stomach. The dose is a teaspoonful to a desertspoonful, in water. As previously stated, a still larger amount of fennel might be given with advantage, and we doubt the propriety of increasing the original quantity of senna as proposed. It would be well, perhaps for the practitioner always to write the prescription in full, instead of depending upon the title only; or, perhaps the committee now actively engaged in revising the United States Pharmacopœia may suggest a formula which may be free from the objections urged against that of the German Pharmacopœia. [*College and Clinical Record.*

ACEPHALOUS MONSTROSITY.—D. M. Baxter reports the following to the *Nashville Jour. Med. and Surgery.*—About ten o'clock December 11th, I was summoned hastily to see Mrs., B. æt. 20, who had been in labor for eight hours with her first child.

Mr. Edwards, a second course student and a practitioner of some year's standing had been in attendance since the commencement of the labor, and becoming puzzled as to the nature of the presentation had caused the family to send for me. When I arraived a live male had been born, and the cause of the failure of the physician in attendance to make out the presentation was easily apparent. The child was a monstrosity of the acephalous class. It was large, strongly developed and perfectly healthy, and to all appearances a nine months' child. The following were the deformities: The fingers of the left hand were entirely absent. The left thumb was well developed but bound down firmly into the palm of the hand by adhesions. The right hand presented two webbed supernumerary fingers between the thumb and index finger, both webbed; three webbed fingers on the ulnar half of the hand and the ungual phalanx of the thumb was wanting. Right foot almost perfect. Great toe of left foot amputated at first joint. Lower half of face perfect. An immense central cleft occupied the site of the upper lip and nose, and extended up to the frontal bone. Only a small portion of the upper lip on each side was present. The cleft extended entirely back to the fauces. On each side of the fissure in front, the superior alveolar process on each side jutted into the chasm, presenting on each side a fully formed molar

tooth. Right eye perfect. Left entirely absent, its place being supplied by an oval lobule containing fatty tissue. That part of os frontis entering into the formation of the right orbit was present, the rest of the frontal bone was missing. All the bones entering into the formation of the vertex were absent, and from the opening protruded a smooth globular mass consisting of the scalp and containing the brain. It was doubtless the presentation of this mass that had embarrassed the diagnosis of the position of the child. As will be noticed by the preceding description the defect was limited to the left side. The mother was well developed and healthy in every respect. The history of her pregnancy as far as could be elicited, gave no evidence of any unusual occurrence that would account for the sequel. The child was born alive but from the nature of its deformity could not suckle, and therefore died of starvation forty-eight hours after birth.

The placenta was removed about a half hour after the birth of the child, and was followed by the most alarming post-partum hemorrhage. This was checked after a little time by the introduction of the hand and the removal of several small portions of attached placenta. The mother has since done well.

INTRA-UTERINE VARIOLA.—In the *Gazette Hebdomadaire* we notice that M. Depaul mentioned to the Academy of Medicine the case of a woman, æt. 33, who presented herself to a hospital for admission. She was pregnant, and had had variola a few weeks before her application for admission, but bore no trace of it. On April 30th, seven weeks after her admission she aborted, the child being male and apparently dead a month. It presented all the cutaneous signs of a non-confluent variola. On the placenta were found a considerable number of fatty-degenerated villosities, thus, making it difficult to determine whether the death of the fœtus was due to variola or to the diseased placenta. M. Blot narrated the case of a woman who, at the fifth month of pregnancy, visited a friend with the small-pox. A few days after she aborted, and the fœtus was covered with variola pustules, whilst the mother presented no evidence of the disease.

A HARE-LIP TROCAR AND TUBE.—An instrument on the trocar and cannula principle has been devised by Surgeon-Major E. A. Fitzgerald for the operation of hare-lip. The piercing

portion of the trocar is thin and round, with the point strong, sharp and somewhat spear-shaped, and made of the best steel. The tube, about two inches long, is made of coin silver, sufficiently stout so as not to bend on ordinary pressure on straining, and admits of slight expansion and contraction in its entire length, so as to fit on accurately to the trocar. When a hare-lip operation is to be performed, the edges of the fissure having been pared, the trocar, armed with a silver tube, is thrust through a quarter of an inch from the raw edges of the fissure, close under the mucous lining of the lip. This being done, the trocar is withdrawn, and the tube allowed to remain. Two tubes are sufficient for most cases of hair-lip. The margins of the fissures being brought well in apposition, a piece of strong silk or carbolized thread is twisted round each silver tube separately. Long narrow strips of sticking plaster are then passed over the lip, between the tubes and above and below them. The tubes can, as a rule, be safely withdrawn on the sixth or seventh day after the operation.—[*Dublin Jour. Med. Science.*

ECHINOCOCCI IN THE FEMALE BLADDER; CYSTITIS; EXCESSIVE DILATION OF URETHRA; CURE.—Dr. Stuart Eldrige Surgeon of General Hospital, of Yokohama, Japan, contributes the following interesting article to the *Am. Jour. of Obstetrics:*

The presence of hydatids within the cavity of the urinary bladder is a phenomenon of such rare occurrence, even the industry and enthusiasm of a Cobbold having been unable to trace the history of more than five cases (see Parasites, a Treatise on the Entozoa of Man and Animals, London, 1879), that it seems worth while to record the following instance of the kind. The case has an additional value as showing the toleration of the female urethra for the roughest surgical procedures.

August 17th, Ohatsee, Japanese female, aged 20, complained that she had for two months and a half been suffering from painful and difficult urination, with the occasional passage of fleshy masses per urethram. A specimen of urine exhibited gave evidence of severe cystitis, while digital examination showed that the bladder was occupied by something conveying an indistient sense of fluctuation and of singular softness; the other pelvic organs being in normal condition. The passage of a catheter brought away a few drops of muddy urine containing a little blood. The following day, as I was on the point of leaving

town, she brought me a mass of hydatids, sufficient to fill a small tumbler, together with a fleshy body of the size of a plover's egg, which appeared to have sustained the relation of a pedicle to the accompanying vesicles.

Expecting to be absent but for a few days, and feeling that surgical interference was demanded, I gave her a preparation of buchu and hyoscyamus as a placebo, at the same time notifying her that some sort of operation would eventually be required. August 30th I returned and found that during my absence the "grape skins," as she not inaptly termed them, had been passing at intervals, although the medicine had somewhat relieved her pain. Operation was appointed for September 3d. September 2d she passed a second large mass of hydatids which I did not see, nor, indeed, hear of till after the performance of the operation, September 3d, Dr. A. C. Rhoades, U. S. N., assisting. Ether was administered and, with some difficulty, she being a very small woman, I dilated the urethra sufficiently to admit my forefinger; I was surprised and not a little disappointed that, although able to touch every portion of the vesical surface, I could detect nothing whatever of the nature of a tumor or abnormal outgrowth. There was, however, a well marked and peculiar thickening of the posterior and inferior walls of the bladder, the part feeling like a layer of firm jelly though not at all friable, presenting little irregularity of surface and merging imperceptibly into the solid and apparently healthy membrane lining the rest of the cavity. Not satisfied with digital examination alone, I carefully explored the bladder with spoon-bladed forceps and the dull wire curette, but with negative results. The dilatation of the urethra having been, as I before stated, excessive, it was somewhat fissured upon the upper wall, in the direction of its length, not merely at the meatus, but under the pubic arch as well. There was hemorrhage to four or five ounces, a portion of the blood finding its way into the bladder. In washing out the viscus with a Davidson's syringe, a single empty vesicle came away, together with a small amount of clots. Instructions were given that the bladder should be washed out daily for three days with a 1 ½ per cent. solution of carbolic acid, using a double current catheter. On the second day, another empty vesicle was washed out. Great relief was given by the operation from the day of its performance, and, on the fourth day, she passed urine for

the first time since the beginning of her illness without pain or straining; the urine, however, still containing mucous and muddy, the patient was put upon benzoic acid. Under this treatment the condition of the bladder steadily improved until September 10th, when there was a sudden and sharp relapse of cystitis, apparently due to careless exposure of the abdomen during a chilly night. Vaginal examination at this time showed that the abnormal thickness of the vesical wall, above described, had almost disappeared. The carbolic injection was again used for three days, at the end of which time, the urine being normal, the patient was discharged with instructions to continue the benzoic acid, in diminished doses, for at least ten days longer.

Although, as I have before remarked, the urethra in this case was stretched to the utmost limit of safety, and I in consequence anticipated incontinence, perhaps to an inconvenient degree, the canal did its duty throughout. Even while washing out the bladder on the occasion of the operation, it was needful, after injecting, to open the urethra in some manner, as not one drop escaped either by the side of the injecting pipe or after its removal.

Reviewing the case, it appears evident that the whole mass of hydatids had broken down; the last, with the exception of the two single vesicles mentioned as escaping at the time of the operation and a day or two later, having been voided the day before the operation. Surgical interference, unless as treatment for the accompanying cystitis, was therefore not indicated. I was misled, however, by the spongy and thickened condition of the vesical wall, into believing that a considerable mass of hydatids remained. I believe this thickening to have been due to hypertrophy and excessive œdema of that portion of the mucous membrane upon which the parasites had been attached.

Having had some experince of the valne of dilatation of the female urethra for the cure of cystitis of the more usual character, I have no doubt that, in the present case, the operation, though not necessary for the removal of the hydatids, much accelerated the cure of the cystitis. I confess that on previous occasions, when dilating the female urethra, I have always been haunted by a fear of causing incontinecce, though it has never occurred. The case now related, in which dilatation was carried to a point just short of total longitudinal rupture of the

canal, and yet not even an immediate failure of function resulted, affords a valuable lesson and will hereafter relieve me from any fear of the kind, when the parts are normal in structure and tone.[1]

SALICIN IN DIPHTHERIA. Dr. C. C. Conway, speaks of this remedy in the *Va. Med. Monthly*, in the following words:— The value of salicin as an antipyretic is second only to its topical action on the inflamed fauces. I use from two to five grains, according to the age of the patient, blown into the throat; or when this alarms the child, place the powder on the end of a spoon-handle and sliding it down to the root of the tongue, dump it off. This is to be repeated every three or four hours so long as there is much fever, and then repeat at longer intervals. With this treatment, the inflammation is subdued with astonishing rapidity; the membrane is thrown off, and the throat is left in a comparatively healthy condition in from two days to a week.

Of course, constitutional treatment, such as iron, quinine, chlorate of potash, fumigation with sulphurous acid vapor, etc., are not to be neglected, in conjunction with the local use of salicin.

I have not found the use of salicylic acid of advantage, and besides, I dread its depressing effects in a disease tending to asthenia.

SULPHIDE OF CALCIUM IN THE TREATMENT OF SUPPURATING BUBOES.—Dr. Fessenden N. Otis, gives in the *New York Med. Jour.*, a tabulated statement of eighteen consecutive cases of inflammatory bubo occurring with or appearing as the sequel of well-pronounced chancroid, and treated by the internal administration of calcium sulphide in doses of one-twelfth of a grain every two hours. Resolution occurred in fifteen cases and incision was ultimately required in but three. If the rule holds good, that true chancroidal buboes always suppurate and require evacuation, then fifteen out of eighteen buboes must have merely been sympathetic, and not associated with the transference of the

1. [A case of vesical hydatids in a female was reported by Dr. J. A. McKinnon, of Selma. Ala., in the Am. Med. Weekly in 1874 or 1875. The injection of two drachms of liq. sodæ chlorinatæ into the bladder produced violent contractions of the organ and the expulsion within one hour of about a pint of hydatids. The patient has remained well.— Ed.].

process of suppuration from the chancroid to the adjacent sympathetic gland. It is just possible, however, Dr. Otis remarks, that the influence of the sulphide of calcium may, in arresting suppuration, extend to the true chancroidal bubo. The apparent success of the treatment certainly invites a further trial.

PURGATIVE FOR CONSUMPTIVES.—Dr. Ferraud recommends the following prescription in the constipation of phthisis:

℞. Magnesiæ calcinat.,.....ʒss ad ʒj;
Mannæ,.....ʒj ad ʒij.—M.

To be taken in a cup of tea.

When this is mixed with honey it makes an agreeable electuary:

℞. Mannæ,.....ʒj;
Magnesiæ calcinat.,.....ʒss;
Mellis,.....ʒj.—M.

This may be taken in tablespoonful doses in the morning.—[*Phila. Med. Times.*

SCARLATINA, SECOND APPEARANCE IN A VERY SHORT INTERVAL.—A. B., male 38 years of age, was admitted to the Hospital Sept. 25th, having been discharged therefore two days before when he had fully recovered from the desquamatory stage of scarlatina. Two days after had been seized with vomiting and diarrhœa, was restless during sleep, had a poor appetite, and complained of darting pains in the chest and extremities. By Sep. 29th these symptoms had mainly disappeared, but the patient's abdomem became tympanitic; urine small in quantity but free from albumen. On Oct. 2d, these symptoms had disappeared, the patient slept well and had a good appetite. On Oct. 4th a scarlatinal rash made its appearance on the extremities and spread rapidly over the whole body. The tongue was clean, but its papillæ were markedly congested; the patient's temperature rising at the same time to 104¾°. On Oct. 6, the patient was seized by nausea; slept poorly, but the eruption, which is very bright on the face is fading elsewhere. The eruption passed through the usual stages of scarlatina eruption, and finally completely desquamated. Oct. 27, the patient has recovered completely.

The treatment pursued in this case as in other scarlatinal cases, was chiefly supporting, cold sponging to reduce the tem-

perature, followng by the vaseline inunction, especially during the desquamatory stage. Salicylic acid being at times used; the urine is examined daily.—[*Gaillard's Med. Journ.*

CÆSARIANSECTION EXTRAORDINARY. Dr. Gaston Boyd writes to the *Kansas Med. Index*:—A most remarkable and fruitless attempt at Cæsarian section was made on December 15th, by a German girl on her own person. She made an incision one inch in length, one inch to the left and a little above the unbillicus, penetrating the abdomal cavity. On being asked by the attending physican why she did this, replied, "that she might introduced her finger (which she did) and remove her child, as she was four months pregnant." Finding that her efforts failed, she procured a needle and thread and sewed up the gash. It is hardly necessary to add that she was a corpse in two days. At the post-mortem examination, on opening the abdomen, it was found there had been internal hemorrhage and extensive peritontis, with violent inflammation of the intestines and abdominal walls, and that the uterus was not pregnant, or presented any appearance of having been so recently.

EXCORIATIONS AND FISSURES OF THE NIPPLE.—Prof. Gio. Simula, 1880, Sassari, in a memoir on this subject, establishes the frequency of such troubles; 30 per cent. of nursing women being affected, according to Hinkel, 20 per cert. according to Schraden.

The nipples are ordinarily affected in the first days of nursing, but rarely later on.

The causes are generally want of cleanliness, aphthæ in the mouth of the children, and the continual suction, which acts, says Joulin, like permanent cupping; the nursing of a child several months old sometimes induces these troubles. The accidents are of gravity, or not, according to the intensity of the inflammation.

The pain may be so excessive as to induce convulsions; the inflammation may extend to the mammary gland itself, whence abscess in this organ is accompanied by high fever. The nipple may be completely destroyed, and the resulting cicatrization prevent nursing thereafter from that breast.

As preventive treatment, Professor Simula prefers lotions o pure water to the astringent washes recommended by Trousseau

and Cazeaux, which, in the end, he is persuaded cause the exfoliation of the epidermis. Against fissures of the nipple he recommends lotions of glycerine in a solution of bicarbonate of soda, (Startin). He considers the application of compresses wetted in pure water, over the parts, as the best treatment in these affections, allowing the child to nurse as seldom as possible.—[*Med. and Surg. Reporter.*

FATAL BURNS DURING ADVANCED PREGNANCY.—THE BURNS OF THE MOTHER APPARENTLY IMPRESSING THEMSELVES ON THE CHILD IN UTERO.—Much has been written *pro* and *con* on the influence of the maternal imagination in the fœtus in utero. A great deal of acute reasoning and extended research in biology, embryology and kindred studies has been brought to bear upon this subject, but unfortunately but very few cases of undoubted genuineness have been ever brought forward to support the affirmative side of the question. In the *American Journal of Medical Sciences* for January, 1881, we find detailed a case by Dr. William Hunt, and it is such a rare and exceptional one, that we here reproduce it together with the illustrations.

It is a case also that is quite unique and its authenticity is vouched for by the most distinguished members of the profession of Philadelphia. The case is as follows: Anne L., æt. 30. was admitted to the Pennsylvania Hospital, Wednesday, May 8., 1880, for very extensive burns she had and which were caused by her clothes catching on fire from a kitchen grate. She was at the time about eight and a half months pregnant; she was finely developed, and no evidence of specific disease could be found upon her. Her husband was a healthy man, and so was a child, of about six years, who came to the hospital while her mother was there. Dr. Hunt saw the patient a short time after her admission. As the case seemed, most probably, a fatal one, he immediately ausculted for fœtal heart sounds with the intention of leaving directions in his possible absence, for abdominal section to be performed at once upon the death of the mother, with the hope of saving the child.

The sounds of the fœtal heart were found to be very distinct, but its action being so rapid that it was impossible to count the beats. All efforts to do so, resulted in failure. At the same time, the mother's pulse was 116. She had become

considerably warmer, as can be seen by the chart (fig. 1), for, on her admission, her pulse was 88, and she was in condition of shock. The burns were treated in the ordinary method; and the patient was made as comfortable as possible, under the circumstances. At the same time, frequent auscultations were made to ascertain the condition of the child. These examinations were all made with great care. The excessive rapid action of

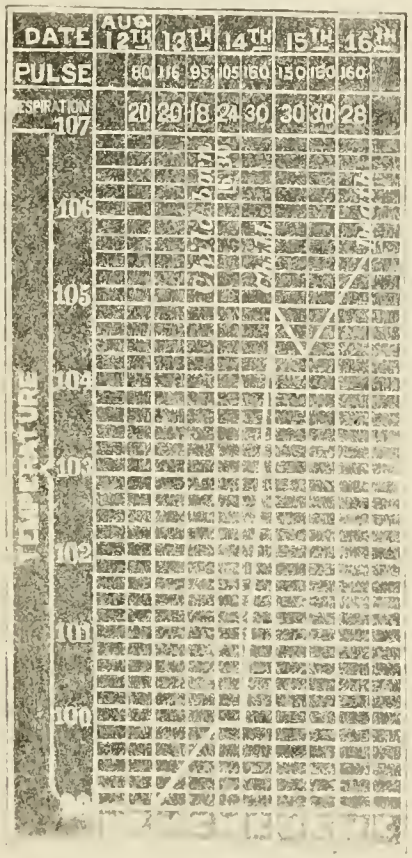

Fig. 1. [illegible]

the heart continued, and it could be clearly heard at any time up to 12 P. M. on Thursday. At 2 o'clock it was found that the beating of the heart had entirely ceased, so that death must have occured within these two hours.

At 5:20 P. M. on the same day, an active labor set in and terminated at 6:30 P. M. in the birth of a well-formed, but dead female child. The mother lived until the afternoon of Saturday, May 15., when she died.

The annexed pulse and temperature chart (fig. 1) taken at the time, gives the best idea of the progress and termination of the case.

So much for the case. What the author deems the most

Fig. 2. Burns sustained by Anne L., on the Anterior Aspect of the Body.

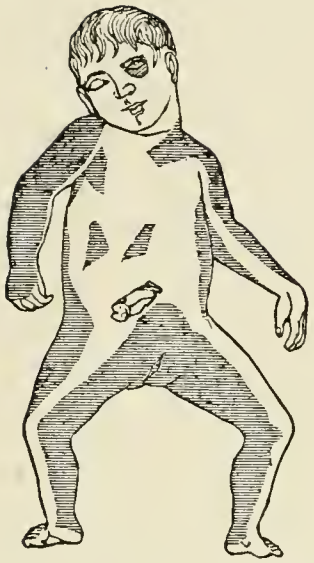

Fig. 3. Anterior Aspect of the Child's Body.

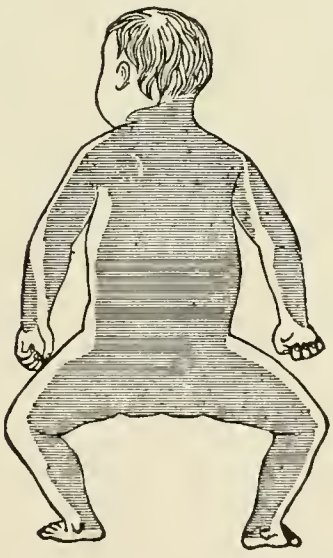

Fig. 4. Posterior Aspect of the Child's Body.

important part to record, and justly so, is, that *the child was apparently blistered and burnt in extent and in places almost exactly corresponding to the injuries of the mother!* The annexed drawings (fig. 2, 3, & 4), made from sketches taken at the time by Dr. Packard and Wetherill, entirely independant of each other, can give the best idea of these appearances. It will be noticed that there is a wonderful similarity in the location of the blisters which are represented by the shaded lines. The back of the mother was not sketched, for want of sufficient time, as her friends were in a great hurry to remove the body. However, it is sufficient to say that it was the seat of one continuous burn, as is shown upon the corresponding part of the child (fig. 4). The blisters on the child were standing out fresh and full, as though but recently formed, and in some places the derm was deeply involved, as on the mother. Of course, all ordinary explanations, that could occur, were suggested—pemphigus, syphilis, maceration, etc., but upon close examination all, of nearly all, agreed that none of these explanations fitted the case.

The well-known dermatologists, Drs. Duhring and Van Harlingen, Prof. Penrose, Dr. E. A. Spooner, Albert Fricke, A, P. Harris, W. S Forbes, W. B. Atkinson, J C. Wilson and the Officers of the hospital examined this interesting case, but were all unable to find a satisfactory explanation for this strange phenomenon.

This is a case which is destined to become classical, it is one which is most interesting from all points of view and will excite a great deal of speculation in regard to the cause and *modus operandi* by which such an extraordinary occurrance could take place.

CHLORAL-HYDRATE AS A BACTERICIDE.—M. Dmitrieff, in a recent inaugural dissertation published at St. Petersburg, states that he has tested the effect of chloral-hydrate, both clinically and experimentally, on unhealthy, badly granulating, wounds. By excision of a piece of skin in dogs, and infection of the wound with putrefying matter, he produced unhealthy ulcerating surfaces. Some of these he dressed with one or two per cent., solution of chloral hydrate, while the rest were covered with a moist cloth. The first very soon became healthy, and cicatrized before the others. The ulcers, on microscopic examination, were found covered with a layer of micrococci, which disappeared after two or three days dressing with chloral-hydrate. These results were confirmed clinically: and the writer has also shown that an equal quantity of one per cent, solution of chloral-hydrate destroyed, in twenty minutes, all mobility of the bacteria in a putrefying infusion of flesh.—[*Clinical News*.

MANCINI ON CEREBRAL LOCALISATION.—Dr. Mancini (*Lo Spermentale*, October 1880), in this paper on localisation in general, gives details of a special case of aphasia which came under his notice. The patient was aged 43, and up to the moment of the attack had enjoyed perfect health. Suddenly, while at work, he lost the power of speech, which, however, after a copious bleeding, was in part restored. He was admitted to the hospital seven days after this first attack, when his condition was as follows. The temperature of the axilla was 40.5 deg. Cent. (104.9 deg. Fahr.); on the left side of the head, 30.5 deg. Cent. (103.1 deg. Fahr.): on the right, 38.4 deg. Cent. (101.1 deg. Fahr.); pulse 104, with violent action of the carotid. When questioned, he appeared able to understand, but could not articulate. The earliest symptom in the case had been aphasia, but towards the close of life complete coma supervened, with suppression of urine and Cheyne-Stokes breathing. On examining the brain twenty five hours after death, there was found, within the fissure of Rolando, a long and recent clot, soft in consistence, and weighing about 20 grammes. It extended in a direction towards the base of the brain, entering into its substance. In the centre of this clot a small artery was found, which had ruptured, and whence the hæmorrhage had evidently come. On the removal of the clot, the subjacent brain substance did not appear to have been in any way altered. No other morbid appearance

were found until the lateral ventricles were reached, when another clot was found on the left corpus striatum, of a dark greyish color, weighing about 10 grammes. The substanc of the corpus striatum on which the clot rested, did not seem to have in any way suffered; hence the absence of certain symptoms during life which might otherwise have been looked for. This latter clot was probably of much earlier date than that in the fissure of Rolando, and so far as the history of the patient went, had never at any time during life caused disturbance. The absence of all signs of inflammation or departure from health in the substance of the convolutions, immediately around the fissure of Rolando was certainly remarkable. The author does not hold with Broca, that the centre of speech is confined to the third convolution of the left side, but rather that hæmorrhages causing aphasia are much more frequent on the left side than on the right, owing to the direct origin of the left carotid from the aorta. In this case the difference of temperature was very distinctly marked in life between the two sides of the brain. During life the diagonsis had been distinctly made out, except so far as the clot on the corpus striatum was concerned. —[*London Med. Record.*

TREATMENT OF POST-PARTUM HEMORRHAGE BY A GRADUATED COMPRESS OF ADHESIVE PLASTER.—The following is taken from the *Clinical News.* By this I mean a state of affairs as follows: The uterus after the delivery of the placenta contracts firmly; but in from half an hour to two hours the patient complains of a warm flow, and her napkin is found to be wet with fresh blood. This, if not attended to at once, may end in a severe internal hemorrhage, due in measure to the uterus, by slight, but frequent relaxations, becoming filled with clots, then not having power to expel them, the womb is held open while the blood rushes forth from the sinuses. It follows then that the womb, even after firmly contracting, frequently relaxes, and in certain cases, where the blood does not easily coagulate, this relaxation causes a small but persistent flow, which in many cases ends in death. The first case of this character I ever saw was a lady, who, after giving birth to twins, was suffering from an intermittent flow of blood all day. The womb contracted, indeed, but it again and again relaxed. The delivery took place at 12 midday, and at two o'clock next morning I was called to assist my

father and the medical gentleman who had delivered her. The patient had a faint, rapid pulse. Her womb on being held firmly in the hand contracted like an india-rubber ball; but after holding it from three to five minutes, you felt it becoming soft and contracted, blood was continually flowing during these intervals. Ergot had been given. Electricity had been used, and was being used at that moment. In fact it was easy to cause contraction, but thus far impossible to hold it. Finally, on my father's suggestion, a graduated compress of adhesive plaster was prepared. This was placed upon the womb, which was then crowded backward and upward on the brim of the true pelvis, and to the right of the middle bone of the sacrum, and held by a bandage of adhesive plaster about four and a half inches broad, and which was made to girdle the body as firmly as it could be drawn. We were happy to find that all hemorrhage ceased, and did not again return.

Case. II.—Was a case of similar character. The woman had been delivered, and the same kind of flow had been taking place all day. The battery was used. Iron had been injected. The flow still continuing, the patient's husband had become alarmed. After using the battery for half an hour, and finding that a small but dangerous flow was still occurring, I advised the use of the adhesive bandage and compress. It controlled the hemorrhage.

Case. III.—Was my own. I feared hemorrhage, and although the womb contracted well, I waited an hour, when, to my alarm, the blood commenced to flow and the womb to intermittently contract and relax. I tried hot water, but not succeeding in making the womb contract for any length of time, I used the bandage, and all hemorrhage ceased. I may mention that in this case I used ice, conjoined manipulation, and hot water, all of which secured contraction, but none secured a permanent contraction.—[*Martin Burke in Medical Record.*

DA COSTA'S TREATMENT OF SCIATICA.—In a clinic given by Dr. Da Costa, ten cases of sciatica were treated with deep hypodermic injections of chloroform daily, near the seat of pain. After a few days, if improvement was not marked, a mixture of ten grains of iodide of potassium with two drachms of ammoniated tincture of guaiac was ordered.—[*Clinical News.*

REPORT OF TWO CASES OF EXTENSIVE FRACTURE OF NASAL BONES, TREATED BY A NEW METHOD. BY LEWIS D. MASON, M. D. Surgeon to the Long Island College Hospital.—Since the publication of my paper on "An Improved Method of Treating Depressed Fractures of the Nasal Bones," in the *Analls of the Anatomical and Surgical Society*, Vol. II., p. 107, two additional cases have been treated by this method, making three cases altogether that have been so treated. The first case, that of the boy John Grady, has already been reported in the above Journal; the second and third cases are as follows:

C. B., U. S., æt. 27, truckman, was brought to the Long Island College Hospital, Nov. 29th, 1880, for treatment. He had fallen from the seat of his truck some eleven feet upon the pavement. He was intoxicated at the time. The force of the fall was received upon his face, producing a comminuted fracture of the nasal bones, and also fracturing the nasal processes of the superior maxillæ. There was also a lacerated wound of the right inner canthus, and a contused and lacerated wound of the forehead. The usual complication of serous infiltration of the tissues was present in a marked degree, but not enough to completely mask the deformity, flattening of the bridge being quite apparent. A probe introduced into the the superior meatus demonstrated that the space was encroached upon by the broken fragments. Marked crepitus with free lateral motion of the nasal processes was present. The depressed bridge was elevated in the usual manner, care being taken to restore the full calibre of the superior meatus by lateral, as well as forward pressure of the probe. The restoration was easily effected, the contour of the bridge being readily traced with the fingerr As no especial line of fracture could be determined, owing to the extensive comminution and swelling, the needle was passed as nearly as possible through the base of the nasal processes between the comminuted fragments, not meeting with any resistance. A ribbon of thin rubber was passed over the nose, made moderately tense, and the ends fasted to the point and head of the needle by puncture. Over all a cloth wet with evaporating lotion was applied. An anæsthetic was not necessary during the passing of the needle, the patient being in a state of partial alcoholic coma. The needle was withdrawn about the tenth day following the operation. Considerable suppuration resulted from the wounds on the forehead and inner canthus. With this exception, the

case progressed favorably, and a few days subsequently he left the hospital. As the tissues were somewhat congested, the outline of the nose could not then be accurately determined. The patient returned for inspection December 28th. The nose was quite straight, the swelling had entirely subsided, and the nasal respiration was perfect. He was well pleased with the result, and stated that he had always had a marked deviation of the nasal cartilage to the right. His nasal respiration had also been somewhat impaired; but since the operation, the nasal septum was much straighter and his respiration improved, the air now passing readily through the formerly partially obstructed nasal passage.

I am indebted for the report of the following case to Dr. C. B. Nancrede, Surgeon to the Protestant Episcopal Hospital, Philadelphia:

——, German, æt. 45, was brought to the hospital in the early part of September, 1880, suffering from an extensive compound comminuted fracture of the nasal bones, and the nasal processes of the superior maxillæ, involving also the nasal spine and eminence of os frontis, and possibly a displacement of the vertical plate of the ethmoid. The injury resulted from the kick of a horse. The bones were extensively comminuted. Not having a proper pin at hand, I passed a long insect pin between the hindermost fragments and what remained of the nasal processes of the superior maxillæ. A strip of ordinary adhesive plaster, having a slit for the head of the pin, was then passed over the bridge of the nose, and the pin's point forced through the other end. A wet dressing was applied, and rest in bed enforced. At the end of the fifth or sixth day the pin was removed. Before the removal of the pin the nose was occasionally moulded by my fingers or those of my assistant. When the patient was discharffed his nose had certainly as good an appearance as if no injury had been sustained. I have since been informed that considerable necrosis ensued. This, of course, would have resulted under any plan of treatment, being due to the extensive comminution of the bones, which were fairly "powdered." I can bear testimony to the excellence of the method, being much less painful and anoying in the end than those usually employed.

I am convinced that by no other method could the natural contour of the injured feature have been restored and maintained.—[*Annals of Anatomy and Surgery.*

THE NORMAL AXIS OF THE SOLE OF THE HUMAN FOOT.—Dr. Benjamin Lee, writes as follows on this subject: It is a universal popular belief that the human foot is straight, and that in its straightness lies its beauty. Nor is this impression confined to laymen. If I should put the direct question to this Society, composed as it is of men learned in anatomy, "Is the axis of the sole of the foot straight or crooked?" the probability is that a very large marjority would unhesitatingly reply, "straight." Nothing, however, can be further from the truth. The axis of the natural, undeformed foot is a curved line. By the sole of the foot I understand that portion of the naked foot which comes in contact in the shape of the sole of the shoe. By the axis of the sole I understand a line starting at the middle of the posterior edge of the heel or *os calcis*, and running forward in the medium line of the sole until it terminates at the middle in the toes, which point lies usually between the second and third toes. Now this line will be found to be straight for little more than the lenght of the *os calcis*; it then begins to diverge toward the mesial line of the body or inner side of the foot. If continued as a straight line, instead of striking the middle of the foot anteriorly, it will, in the great majority of cases, strike the middle of the little toe. A glance at these diagrams, which I have had made of heroic size in order that they may be readily seen and understood from all parts of the room, will convey the idea in less time than words could. The one, the straight sole (fig. 5,) is the ideal of the shoemaker; the other

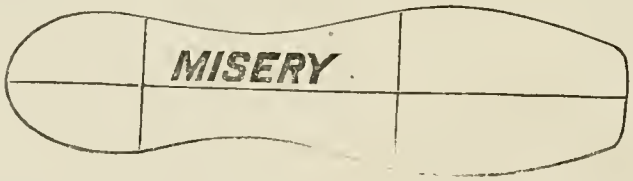

Fig. 5. Straight sole. The ideal of the shoemaker.

the curved sole (fig. 6), is the ideal of the anatomist, of the

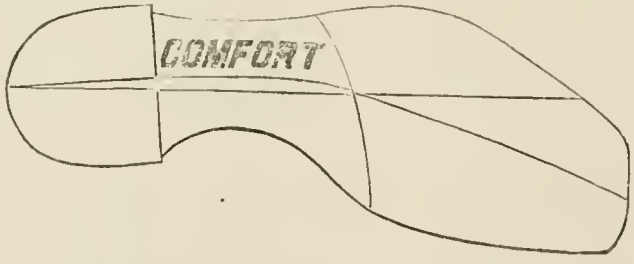

Fig. 6. Curved sole. The ideal of the anatomist.

artist, and, I say it with all reverence, of the Creator.

To Prof. Hermann Meyer, of the University of Zurich, is Europe, and indeed the civilized world, indebted for its emancipation, not yet fully realized, from the galling tyranny of the French bootmaker and the French dancing master, a tyranny by the side of which, if measured by the misery it has caused, that of Czar and Emperor sinks into comparative insignificance. In a modest little pamphlet, entitled "WHY THE SHOE PINCHES," he discussed in the fullest and most scientific manner the anatomy of the foot, and showed conclusively that the principle upon which shoes were universally constructed was radically wrong, and could result only in injury to that most valuable member. The two points to which he especially took exception were: First, The idea that the entire sole is straight; and Second, The idea that the inner side of the foot from the metatarso-phalangeal joint of the great toe to its extremity is curved. The second error is almost as serious as the first. In point of fact, the great toe, in a natural, undeformed foot is straight. The aim of the shoemaker has been to make each foot symmetrical in itself, while the foot, being a double organ, follows the law of all double organs, and is symmeterical only with its fellows. If we could succeed in making both feet exactly alike we should at once lose the beauty which comes from the comparison of the two objects symmetrically unlike, one of the highest sources of gratification which the sense of sight is capable of appreciating. In carrying out this aim he has made the shoe not simply what it should be, a covering for and protection to the foot, but an *orthopædic instrument*, the object of which is to straighten out its natural curve.

A glance at these diagrams, as I place one over the other, will show at what points the pressure is applied in order to produce this result. (Fig. 7.) They are observed to be the inner

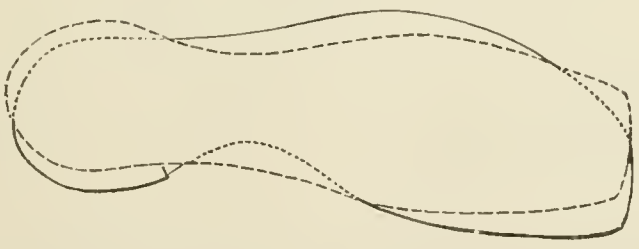

Fig. 7. The straight and curved soles contrasted, where the pressure is exerted in straightening the foot.

side of the heel, the outer side of the middle of the foot, and the inner side of the great toe. It is also to be noticed that at the

same time that strong pressure is brought to bear upon the first or metatarsal joint of the great toe, its distal extremity is forced toward the middle line of the foot; the result of this necessarily is to convert the inner surface of the articular portion of the metatarsal bone into a fulcrum, against which the first phalanx is forced outwards. The articular surface of the phalanx is thus uncovered, and, instead of remaining in contact with the opposite articulating surface of the metatarsal bone, it is in contact with the shoe, protected only by integument. A provisional bursa is sometimes established, itself often the seat of inflammation; but this does not prevent the sensitive joint surface and the synovial membrane from ultimately receiving injurious pressure, which results in the hideous and painful deformity known as a *bunion*. At the other end of the toe the continued pressure against the matrix of the nail induces a suppurative inflammation of low grade, with fungous granulations, to which the name of *in growing toe-nail* is given; while the other toes crowded together and overlapping (fig. 8.), are not long in

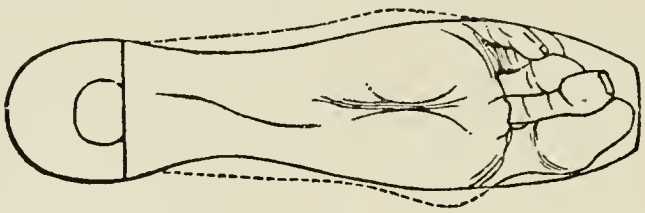

Fig. 8. The position of the toes in a straight-soled shoe.

becoming knobbed with corns and callosities. By dint of beginning in early infancy or childhood, as Chinese mothers do, the shoemaker sometimes completely succeeds in his object of straightening out the curve of the foot. The drawing which I now show you (fig. 9.) is a tracing of an actual foot. As you

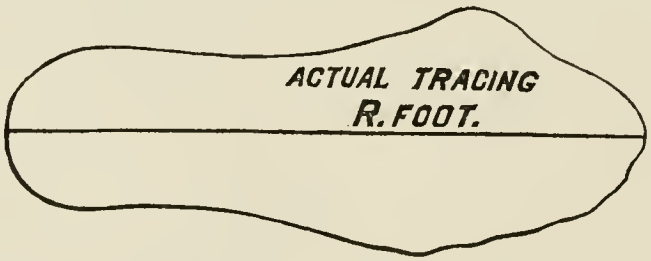

Fig. 9. The straight foot. The shoemaker's triumph.

observe, its axis is a straight line from the middle of the heel to the middle of the toes; but you also notice at what a fearful cost of years of suffering, as witnessed by the enormous bunion, the result has been obtained. It may well be doubted whether, to

use the expressive French phrase, the "game has been worth the candle."

The process of deformfng the foot of an American child is usually about as fololws: As soon as the victim is able to walk, a pair of straight-soled shoes, rather narrower than the feet, is provided for it. In the course of a few weeks the shoes, being worn the one habitually on the right and the other on the left foot, begin to take the shape of the respective feet. This is no sooner observed by the careful mother than she exclaims: "Why, Johnny! you're wearing your new shoes all out of shape; you must change, and wear them on the other feet." And if Johnny forgets, finding the change by no means conducive to comfort, he is whipped to aid his memory. It will readily be understood how well adapted these shoes, now conformed to the natural curves of the feet, are to straighten out the curves of the opposite feet. By this simple means, repeated as often as the feet begin to assert their independence, and persistently carried out, it often happens that by the time a child is six years old its great toe will be seriously deflected from the rectilinear position, which it ought to occupy, and the curve of the sole partially straightened. Fortunately, lasts and ready-made shoes can now be obtained which approximate quite closely to the natural shape of the foot; and not only can the foot of the child be preserved perfect as it grows up by using such lasts and shoes, but a foot which is already somewhat distorted may be coaxed back more or less nearly to its original shape. I can speak experimentally on this point, which must be my excuse for the appar-

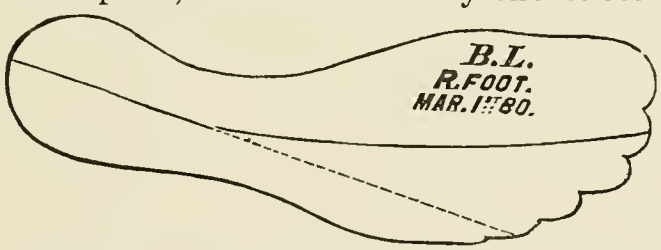

Fig. 10. Tweny years of an anatomical shoe.

ent egotism of introducing a tracing of my own foot. When I first began to wear shoes made with regard to this principle, more than twenty years ago, my feet were about as much out of shape as the average adult foot. I had numerous corns and a fair promise of bunions and of an in-growing toe-nail on the left foot. And here let me advert to a fact not generally known, viz., that the left foot is usually the longest. In ignorance of this, the right foot is usually given to the shoemaker for measurement; hence the left shoe is too small, and the left foot is the one which is most apt to become crippled. You will notice the marked curve of the axis of this sole (fig 10.), and the straight-

ness of the inner edge of the great toe, which of course means that the toe itself is straight; and you will perhaps be ready to exclaim, with the Philadelphia shoemaker to whom I showed my lasts on coming to reside in that city: "Why, doctor! what a crooked foot you must have!" Although he very reluctantly makes my shoes on them, he will never believe to this day that my foot is not deformed.

Here is another tracing (fig. 11.) of a tolerably natural foot

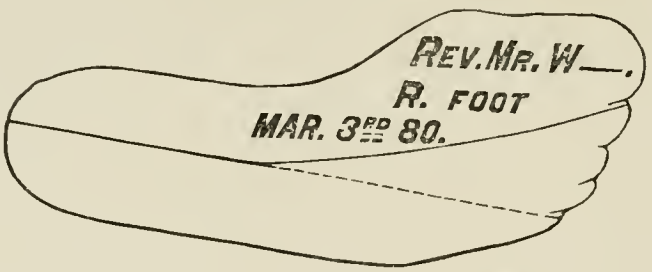

Fig 11. A nearly natural foot. The result of wearing easy broad-soled shoes.

which I happened to obtain in the following way: A clerical patient coming into my office not long since, observed a tracing of my own foot, which I have just shown you, lying on my desk. Picking it up, he regarded it mournfully for a moment heaving a deep sigh, and said: "Ah! doctor, that is just the deformity of my little boy's foot. I must bring him to see you." While expressing my sympathy with his little son's misfortune, I assured him he was in error in supposing that the drawing represented a deformed foot, as it was that of my own, which was tolerably natural. Finding it impossible to overcome his incredulity on this point, I glanced down at his own feet, and noticed that he wore a good, generous, broad-soled shoe, which could not have produced much distortion; and said confidently, "I venture to say that your own foot is nearly as crooked as mine." He at once took off his shoe and stocking in order to disprove the truth of my assertion, and this is the result. You observe here again the curved axis, the straight line from the middle of the heel striking the little toe, and the straight great toe.

We find, as a rule, the feet of women much less seriously deformed than those of men, especially in the higher walks of life, from the fact that their shoes are made of so much softer materials, and that they lead, on the whole, more sedentary lives. And when a lady has been confined to bed for a long period of time by chronic illness, her foot often acquires an

almost perfect shape. One such foot I have seen, white as alabaster, exquisite in its outlines and curves as a sculptor's dream. Its proprietor has been for many years confined to her room. most of the time to her bed, but, as is often the case in such maladies, had lost nothing of her youthful plumpness and beauty. The drawing (fig 12.) belongs to that category, the patient

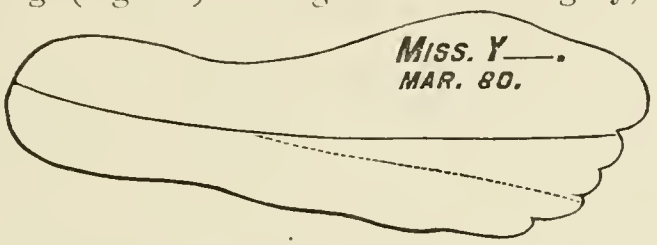

Fig. 12. A foot once deformed by shoes partially restored by disuse of shoes.

having been a confirmed invalid for two yeärs;

The ready made shoe, to which I have referred as conforming to the principle I have announced, is know as the "Waukenphast," first introduced under that name in England, but now manufactured quite extensively in New England. It may be obtained of Wanamaker in Philadelphia, and is made of so many different proportions as well as number, that almost any foot can be fitted by simply sending the measurements. There are also a number of shoemakers in Philadelphia who have provided themselves with full sets of lasts of this pattern, and make the shoe to order. Contrast the comfortable, easy, natural position of toes in such a shoe (fig. 13.) with that of the cramped

Fig. 12. Position of toes in an anatomically constructed shoe.

distorted, overlapping toes in fig. 8., and nothing further will be needed in the way of argument. I feel confident that in bringing this humble subject to your notice, I have deserved and shall receive the gratitude of every member who has known what it is to suffer the torture of an improperly made shoe and its consequences. I feel not less confident that there is a good time coming, when the shoe will universally be conformed to the natural shape of the foot, and when, as a necessary result, corns, bunions, *et id omne genus*, will cease from off the face of the earth.—[*Trans. Med. Soc. Penn.*, Vol. XIII. Part I.

Editorial.

TRI-STATES SOCIETY.

Several of our esteemed contemporaries have occupied a great deal of their space by communications or editorials reflecting upon the Tri-States Society. One wants to know the *raison dêtre* of the society; we might retort with more justice, by asking that journal why it exists, for assuredly the medical world would never miss it. W. W. S., in the *Lancet and Clinic* said some very hard things about the society and yet he was in Louisville but a day and not a whole one at that. He had a very long paper which was not listened to with rapt attention and he afterwards tries to vent his spleen in this manner.

We think that the Tri-State has as much the right, and there is as much propriety in its existence as in that of any other society. We acknowledge that the meeting at Louisville was not a success; they had too many colleges to attend to. If there is no *raison d'être* for the Tri-States Society there is still less for the American Medical Association. We confess our inability to catch any argument whatever in the reasons assigned for the superfluity of the Tri-States.

We are here compelled to say that it has not been conducted as well as it might have been. That the committees did not do their work thoroughly and that strangers were obliged to wait, whilst home physicians read their papers. Reform is necessary and a few steps have already been taken in that direction.

In the last number of the JOURNAL we gave the conclusion of the report or the proceedings of the Tri-States Society. We made no promises nor did we boast of our stenographic reporter, but we think that we have presented the best abstract of the proceedings of any journal. Besides we present to our readers

several of the best papers, in full. We have no large corps of stenographers, in fact, we do not keep any, but we manage always to give our readers the fullest reports.

STATE BOARD OF HEALTH.

Some time ago Dr. Conery presented to the St. Louis Medical Society a series of resolutions which were commendatory to the establishment of a State Board of Health. The doctor made quite a neat little speech in favor of the resolutions which were adopted and a committee appointed to bring the matter up before the legislature. Dr. Rauch the efficient Secretary of the Illinois State Board of Health, was present and on invitation made a long and interesting speech, upon the practical workings of the Illinois Board and the readiest way of obtaining the establishment of a State Board in Missouri.

We are satisfied we need a State Board of Health, if we need anything We are surrounded, encumbered, by large numbers of quacks who openly ply their nefarious vocation. We have colleges existing merely upon paper and which claim more privileges than those long established, and faithfully working for the common good of the profession. If we do not secure a State Board of Health this session of the legislature, we will have to wait two more years with the same prospects. There is too much of a pressure brought to bear upon this question by the quacks and charlatans and it is only by a combined effort of all the profession that progress can be made in the right direction.

We hope that every physician, who deserves the name of such, will interest himself in the measure, and it is our country friends who can help us, by inducing their representatives to support a bill designed as much for the protection of the public as for that of the profession.

INVESTIGATION OF THE YELLOW FEVER GERM BY DENSITIES

Dr. B. F. Gibbs, U. S. A., read a paper at the recent meeting of the American Health Association of New Orleans, proposing to find the germs which are supposed to originate and spread yellow fever, by floating the germs in a gas more dense than the atmosphere.

He calls the hold of a yellow fever stricken ship, a culture cell. Supposing that the germs are too light to float in common air and not too heavy to float in carbonic acid, the hold of the ship is to filled with carbonic acid, by chemically disengaging it from a carbonate. One hundred tubes are to be placed in the bottom or side of a box; these tubes are to be filled with gun-cotton and the carbonic acid caused to pass through the cotton by a pump which will raise the heavy carbonic acid from the hold of the vessel and force it into the cotton, and by an aspirating pump on the other side of the cotton. It is expected that the cotton will catch the floating germs, after which they may be examined by means of the micoscope.

It is not claimed that any germs have yet been identified.

Book Reviews.

DEUTCHES ARCHIV FUER GESCHICHTE DER MEDICIN UND MEDICINISCHE GEOGRAPHIE.

(German Archives for the the History of Medicine and for Medical Geography.)

The third volume, published quarterly, is now completed, and thus far the Archives have brought out a great variety of most interesting and important subjects, essays, reviews, miscellanies, etc.; the merits of which are vouched for by the select staff of contributors, representing various nationalities, and in which America is represented by Dr. Bissel of Washington.

In every number the greater part is devoted to subjects on the history of medicine, though geographical medicine receives attention; yet, the scientific worth of the facts given, which admit of immediate application for practical purposes, may fully compensate for the smaller share the "Archives" contain on these topics; and particularly, as the authors, who relate these facts, have been eye-witnesses of them in personal exploration and experience; as, for instance, Gerhardt Rolphs, M. D., the African explorer; Dutrieux, M. D., and others.

The information gained, and the important facts derived from the contributions of these eminent writers and high authorities, are useful in solving problems in medicine which hitherto still appeared occult or inexplicable. One out of many examples may be here adduced as an illustration: "In the Sahara, contrary to the prevalent ideas, a healthful climate is found to prevail, and the percentage of atmospheric ozone is there found to be equal to that on the great Oceans; and only a diminution is noticed when the 'Samum' blows, especially from the South or South-East. Now, if in connection with these facts it may be remembered that cholera is not known to prevail in the Sahara, or that caravans never suffer from it when travelling through it, the law seems well established that where atmospheric ozone is found in excess fevers pertaining to the class of cholosis, do not prevail." *

* As from our standpoint Intermittent, Remittent, Bilious and Yellow fever, Cholera, etc., pertain to the class Cholosis, (which we have fully diluted upon and probably elucidated in our publications on Cholera, Yellow fever, etc.) the observation of Prof. Prestel, that when ozone is found in the annual means or in excess that Intermittent and Remittent

But with the change of climate and soil we find it further stated, in the Archives, that the prevalence of diseases has also changed. In Morocco, for example, we find Cholera still prevailing but Pulmonary Tuberculosis not, and we find the Plague to be extinct.† It is also interesting to learn, as a matter of history and culture in medicine, the treatment which the natives of Morocco pursue with the view of curing Cholera. They use "amulets," and make the patient drink fluids, at the same time reciting verses from the Koran, and letting them sleep on the graves of their holy men.

On all other subjects of the medical science, elaborate historical contributions and original articles, from the powerful pen of the editor in chief, afford an insight into the epochs of discovery and development, a thing which is at present in strong demand. The reader is thus enabled not only to survey the historical and chronological progress, and have his acquaintance refreshed with the merits of the great lumina of the past, but the very archigorical evolution of our art and science is placed anew before him.

It appears that the idea is maintained by the editor, and adhered to with the firmness of conviction characteristic of matured scientific judgement, that in the historical knowledge of the development of medicine the very nature of it, as a science, is enwrapped; and he, who masters this part of the discipline, has assimilated the ground-work of the entire study, and needs but the various specialties, composing the whole to attain technical perfection.

It must thus be conceded that to be possessed with a clear understanding of the historical knowledge which the "Archives" endeavor to cultivate, is essential to perfection. Imbued with a similar application of the historical events, tracts and evolution that laid the ground work for the future state of our professional knowledge, and forming the pillars on which the superstructure is resting, the *Allgemeine Medicinische Centralzeitung* gives expressions endorsing these sentiments, in regard to the merits of the "Archives," in the following language, which is here reproduced: "The precepts of medical history are the marks that remain as monuments of transition of daily thought; as monuments of an eventful past; as monuments, finally, of wild aberration or luminous wisdom. Whoever is active in the midst of life must occasionally pause to judge of

fevers do not prevail (Zeitschrift für Meteorologie, Vienna 1873, Nov. 22, 23 & 24) verifies, as related by Dr. G. Rolphs, the correctness of our standpoint, and particularly that small-pox—which we classify with uremic affections—does not appear influenced by the prevalence of ozone (compare Ann. Report of the Vienna "Stadtphysikat" for 1877).

† In 1799 and 1800 a total of 124,500 died then of plague. *Arch.* Vol. I. p. 191.

himself and his era, when the claims of a scientific aspect of his pursuits shall be justifiable; and here it is only the history of medicine from which counsel, in the collection of mental treasures, can be derived. It is to be regretted that there are but few of the Colleges extending facilities to the student of medicine acquiring or completing his historical and literary education. In this regard the "Archives" furnish the resource that is lacking, and by them an endeavor is made to awaken anew the thirst and taste for the history and literature of medical science."

The review deparment has also many and most competent writers, who give extended reviews of all prominent works on the medical *tapis*; numerous and elaborate analytical and bibliographical notices, by which a fair survey of medical literature is made available, as also by a great variety of miscellanies, containing rare and most interesting information. All these facts are fully appreciated by other cotemporaries, and are to the credit of the "Archives" generously acknowledged.

True, the "Archives" bear the attributive adjective "German"; nêverthless it is to be hoped from their universal character, that they will be found indispensable to every one, and will meet with a cordial support, which they most deservingly merit.

C. Spinzig.

A Practical treatise on Surgical Diagnosis, designed as a manual for Practitioners and Students, by Ambrose L. Ranney, A. M. M. D., second edition, enlarged and revised. 8 vo, pp. 471. [New York: William Wood & Co. 1880. St, Louis. C. C. Pease, 514 Olive st.

This is a handsome volume, a mere cursory glance of which will recommend it to the reader. As a text book it will be of the greatest use both to students and to teachers. The points are clearly set forth and in such shape that they may be seen at a glance. The differential diagnosis is at once clear and concise, and arranged in tabulated form for greater convenience in referring to it.

The first part is devoted to the Diseases of Blood-Vessels. The next part is a consideration of the Diseases of Joints which includes the diseases of Joints in general, the diseases of special Joints and Deformities of Joints.

The next part treats of Diseases of Bone and is followed by the part on Dislocations, in which are considered the various dislocations of special joints. Part fifth is devoted to Fractures. The three succeeding parts are respectively devoted to the Diseases of the Male Genitals, including Diseases of the Testicle, of the tunica vaginalis and, cord, of the bladder, of the prostate, of the urethra and of the penis; Diseases of the Abdominal

Cavity; and Diseases of Tissues. The whole concludes with a Bibliography.

From the short résumé of its contents that we have given, the reader will at once see the scope of the work. It is the result of practical experience and the favor with which the first edition was received is an index of its worth. It will prove a most valuable adjunct in connection with works on surgery, and can be consulted with profit by the busy practitioner who has but little time to spare. It will, no doubt, often lead to the elucidation of many a knotty problem ocurring in the wide field of surgery. The mechanical work is well executed.

CUTANEOUS AND VENEREAL MEMORANDA. By Henry G Piffard, A. M., M. D., and George Henry Fox, A. M., M. D., Second Edition, 32 mo. pp. 309. [New York: Wm. Wood & Co. 1880. St. Louis: C. C. Pease, 514 Olive St.]

This is a little vest pocket edition containing a good deal of useful matter condensed and intended as a reminder for medical students, whose memories need a little jogging, now and then.

The Author states, that "The fact that many Students are unable during their pupilage to procure voluminous works on special subjects has induced the Authors to prepare the present volume." We think however, that although sound principles are inculcated in this little volume, it would be of little service to the Student unless accompanied by good Lectures and good Clinical Observation. The nomenclature of the American Dermatological Association has been adopted in the second edition, and this is a feature that will render it more valuable.

The dermatological part is the work of Dr. Piffard, the venereal memoranda being contributed by Dr. Fox. I is a very handy and useful little book.

A MANUAL of MEDICAL JURISPRUDENCE by ALFRED SWAIN TAYLOR, M. D., F. R. S., eighth American Edition from the tenth London Edition. Edited by JOHN J. REESE, M. D., with illustrations on wood. 8vo. pp. 933. [New York: HENRY C. LEA'S SON & Co. 1880. St. Louis: St Louis Book & News Co.]

Taylor's Medical Jurisprudence has been a popular book of reference in courts, for a long time, and it bids fair to remain an authority on Medico-Legal points, the more so, as it has been revised up to the present times. It has been thoroughly worked over and has received valuable additions made by the American editor.

It is needless to make an analysis of this work which is well known both to the medical and legal profession. Since the last edition the principal additions consists in the reports of interesting cases coming under the topics considered.

This volume like that of Thomas on the Diseases of Woman

is gotten up in half Russia binding, which makes the book look much handsomer and, at the same time, is done at a very small advance over the price for the bind'ng in Sheep. It is handsomely gotten up, and faultless in typography.

Ophthalmic and Otic Memoranda. By D. B. St. John Roosa, M. D., and Edward T. Ely, M. D., revised Edition; 12mo, pp. 298. [New York: Wm. Wood & Co. 1880. St. Louis: C.C. Pease, 514 Olive St.]

This is a companion work to the foregoing and is a valuable little remembrancer. As stated in the Preface, "the author would take this opportunity of repeating that his work is rather a Dictionary of Ophthalmic and Otic science, than a text book, that it gives only a bare outline of the subject of which it treats; and that it is never to be recommended as a substitute for the larger works." It has been brought up to the latest times and is quite full as regards the anatomical data.

It contains besides the matter treated, an appendix on various topics; bibliography and what is especially valuable to the student, a glossary, giving the definition and derivation of a large number of words. Quite a copious index makes reference an easy matter. This little book has gone through a number of editions and bids fair to be still in large demand. The present has been thoroughly revised and can be relied upon as a good condensation of the matter on which it treats.

Hygienic and Sanative Meaures for Catharrhal inflammation of the Nose, Throat and Ears. Part I. by Thos. F. Rumbold, M. D. of St. Louis; Geo. O. Rumbold & Co., St. Louis pp. 174.

The diseases of these parts are so prevalent, and so indifferently treated by the general practitioner, that the profession ought to hail a book of this kind with eagerness and pleasure. Though this volume is rather popular than professional, still the practitioner will find in it much valuable information and many valuable hints and suggestions. The Hygiene of these diseases is very important, and a knowledge of it comes mostly, if not wholly, from observation and experience. The author has said as much in his Preface. As, therefore, the general practitioner cannot have this experience, it is fortunate for him that a book of this kind can be had by him.

I am fully satisfied that these diseases should be a specialty, both for the sake of the patient and of the profession; yet, as all persons suffering from these complaints cannot have the advantages arising from the skill of the Specialist, many practitioners ought to qualify themselves sufficiently to do something in alleviating the sufferings of their patients, even though the want of the necessary instruments and other facilities should

prevent them from effecting a cure. From the volume before me, the practitioner can acquire enough information to enable him to handle with some effect the instruments described; but the volume which is specially devoted to the profession, will furnish him with all necessary means of accomplishing much for his patients. "The early bird will catch the worm," and the practitioner who shall be among the first to avail himself of the advantages presented in this volume, will find that he will be the first to reap the consequent pecuniary professional advantages. We cordially commend the work. H. Christopher.

A Practical Treatisé on Diseases of Women. By T. Gailliard Thomas, M. D., fifth Edition, enlarged and thoroughly revised, containing 266 Engravimgs on wood; 8vo. pp. 806. [Philadelphia: H. C. Lea's Son & Co. 1880. St. Louis: Hugh R. Hildreth Printing Co.]

This sterling work greets us once more in a new and revised edition. Dr. Thomas' work has been so long known and has been so favorably received, both by the profession in general, and by specialists, that any words of commendation we might pronounce would sound feeble.

The author acknowledges the omission of many methods and other matter, but it is a book that is very practical and which recommends itself on this account. Although Dr. Thomas has not yet founded a distinct school, his opinions have sufficient weight and many of his ideas are of such worth as to have secured for himself the support of some of the best exponents of gynæcology. That a new edition of his work had become necessary, was apparent to the author as well as his readers; for, gynæcology has made great strides in progress during the last few pears.

The book is handsomelygotten up both as regards typography and binding.

The Microcosm and Other Poems. By Abraham Coles, M. D., Anthor of "Dies Iræ in Thirteen Versions," "The Evangel in Verse," etc. 12mo. pp. 387. [New York: D. Appleton & Co. 1881.] From ihe Anthor.

This book is handsomely bound and gotton up in Appleton's best style. It is illustrated by several handsome artotypes, and is well fitted to grace any private as well as any medical library although especially designed for the medical profession.

The Microcosm forms the leading poem of the collection, and has already passed through one edition. It was first published in 1866, in connection with an Address read at the same time by the author, as president, before the Medical Society at New Jersey, at its Centennial Anniversary. His design was to pro-

duce a complete compendium of that noblest of sciences, the science of the Human Body, and in our judgment he has succeeded.

In regard to the other poems that go to make up the volume, the greater part were written many years ago, but age has not spoilt them as the reader will see.

Too much can not be said in praise of this handsome volume, which to the careful reader shows that much time and thought must have been spent on it by the author, nor has his labor been misplaced, for a better work of this kind we have not seen.

F. M. R.

DIFFERENTIAL DIAGNOSIS: A Manual of the Comparative Semeiology of the More Important Diseases, by F. DE HAVILAND HALL, M. D., Second American Edition, extensive additions. Edited by FRANK WOODBURY, M. D., 8vo, pp. 223. (Phila. D. G. BRINTON, 1881.)

This handy little volume is divided into two parts, the first devoted to general and the second to local diseases. In the first are considered Fevers and diseases of the Blood; in the part assigned to local diseases we find enumerated Diseases of the Nervous System, Respiratory Apparatus, Circulatory Apparatus, Digestive System and Urinary System. The American edition has been more especially adapted to this country, both as regards the subject matter and the authorities quoted. In fact, it has been remodelled, but in such a way, as to leave the valuable features of the original intact and eliminate those parts which only serve to hamper the American practitioner.

The work is a good compendium and cannot fail to be found of great use. It may help to elucidate many a complicated case and assist in bridging over many a difficulty.

One of the faults of the book if fault it may be called, is that it is apt to be too concise in some parts and thus leave the reader under a misapprehension of the facts. For instance, but eleven pages are devoted to Diseases of the Urinary System, when surely that is a subject that ought to deserve an important place and deep consideration. It is true that but little space is given to any class of diseases, and it may be urged as an objection against a book otherwise of the greatest value.

BIENNIAL REPORT of the Directors and Warden of Kansas State Penitentiary, to the Governor of Kansas, for the Fiscal years 1879, 1880. (Topeka, Kan: 1880.)

Dr. M. B. Carpenter is the surgeon in charge of this institution and in the report has introduced a diagram representing the approximate mean of temperature, the rate per cent, of the atmospheric humidity, and the increase in the number of sick during the corresponding five days of each month, for the year 1880. The idea is an excellent one, but it has not been

carried out as well as it could have been. In the first place, the diagram is too small; then again the temperature and humidity lines are made to cross each other when really they would serve their purpose much better if separated. Besides it is very hard to distinguish the lines from one another on account of their being so fine. If the lines were in black and the reference lines in some other color, it would be a great improvment.

MANSILL'S ALMANAC OF METEOROLOGY AND PLANETARY PHENOMENA, for. the year 1881 and New System of Science, by RICHARD MANSILL, (Rock Island, Ill. 1880.) price 25 cents.

This is quite a curiosity in its way, as the author like all weather prophets of any name, has a peculiar theory of his own on the subject. He is considered quite an authority in his neighborhood, but here can never supplant Prof. Tice who is doing all the forecasting that we need.

REPORT OF THE BOARD OF HEALTH OF THE STATE OF LOUISIANA for the year 1880. 8vo. pp. 149. (New Orleans; 1880.)

The motive for the publication of this report is stated in the preface to be the "hostile course of the National Board of Health," which has made such a stir and which seems to be far from settled yet. The present report consists of statistics and attacks upon the National Board of Health. It is a complete history of the quarrel between these two boards and as such will be read with interest by all who have any sympathies with either side. Of course, the State Board appears at an advantage in this report and Dr. Jones, the president, has ably presented his side of the question,

PROCEEDINGS OF THE LOUISIANA STATE MEDICAL ASSOCIATION at its Third Meeting in the city of New Orleans, March, 31st, April 1st and 2d, 1880. 8vo, pp. 111. (New Orleans: 1880.)

This contains a few interesting papers and for a young society this is already a good showing. There is no doubt but that in time, greater improvements will also come and that the proceedings will assume a better form than they now present.

Books and Pamphlets Received.

A Pictorial Manikin, or Movable Atlas of the Human Body, showing the positions of the internal organs; by means of superposed colored plates; by Prof. G. J. Witkowski, M. D., member of the "Faculte de Medicine de Paris." English Translation of Text, by Robert Hunter Semple, M. D., F. R. C. P.,

London, with introductory essay and explanatory anatomical index, by Prof. D. A. Loomis, M. D., Part I. The Neck and Trunk. [New York. Published by Joseph Christadoro, 1880. G. F. Corbiere, Sole agent for U. S. Price per part $5.00]

Twenty-Fifth Annual Report of the Trustees of the State Lunatic Hospital at Northampton, for the year ending Sept. 30., 1880. [Boston, 1881.]

Differential Diagnosis: A manual of the Comparative Semeiology of the more Important Diseases, by F. de Havilland Hall, M. D., second American edition with extensive additions, edited by Frank Woodbury, M. D. 8vo. pp. 223. [Philadelphia, D. G, Brinton, Publisher, 1881.]

Proceedings of the Louisiana State Medical Association, at its third meeting held in the city of New Orleans, March 31st, April 1st and 2nd, 1880. 8vo. pp, 111. [New Orleans, 1880.]

Food for the Invalid; the Convalescent; the Dyspeptic; and the Gouty. By J. Milner Fothergill, M. D., and Horatio C. Wood, M. D., 12 mo. pp. 157. [New York: Mac Millan & Co., 1880. Price $1.00.]

Rocky Mountain Health Results. An analytical study of High Altitude in relation to the Arrest of Chronic Pulmonary Disease. By Charles Denison, A. M., M. D., second edition. 12mo. pp. 192. [Boston: Houghton Mifflin & Co. 1881.]

Mansill's Almanac of Planetary Meteorology, Almanac makers and Weather Forcasters Guide, and new systems of science. By Richard Mansill, 8vo. pp. 51. [Rock Island, Ills., 1880. Price 25 cents.]

Phthisis Pulmonalis and its Treatment with Hypophosphites. By L. de Brèmon, M. D. [New York: John Newton Publisher, 1880.].

Reply to Secretary Schurz, by the Boston Committee. Gov. John D. Long, Chairman. Misrepresentations corrected and important facts presented. [Boston: 1881.]

Speech of Mr. T. H. Tibbles, Tremont Temple, Boston, Mass., Dec., 1880. [Boston: 1880.]

Transactions of the Medical Society of the state of Pennsylvania at its thirtieth annual session, held at Altoona, May, 1880. Vol. XIII., part I. Published by the Society, 8vo, pp. 494. [Phila.: 1880.]

Compendium of Microscopal Technology. A guide to physicians and students in the use of the microscope and in the prepara-

tion of histological and pathological specimens. By Carl Seiler, M.. D., 12mo., pp. 130. [Phila.: D. G. Brinton, 1881.]

Hernia, Strangulated and Reducible, with cure by subcutaneou sinjections, together with suggested and improved methods for Kelotomy, also anappendix giving a short account of various new surgical iustruments. By Joseph H. Warren, M. D., with illustrations, 8vo., pp. 280. [Boston: Chas. N. Thomas. London: Sampson Low, Marston, Searle and Rivington, 1881.]

Biennlal Report of the Directors and Warden of the Kansas State Penitentiary to the Governor of Kansas, for the fiscal years 1879, 1880, 8vo. pp. 109. [Topeka, Kas.: 1880.]

Case in which various Foreign Bodies were introduced in the Brain with Suicidal Intent, and retained there for several months. By Wm. B. Carpenter, M. D. [Extract from *Am. Joun. Med. Science,* April, 1876.]

Photographie Illustrations of Cutaneous Syphilis by Geo. Harry Fox, A. M., M. D. Forty-Eight Plates from Life, colored by hand. No 4. Syph. papulosum et pustulosum; Syph. postulosum; Syph. pustulosum corymbiforme; Onychia syphilitica No. 5. Syph. papulosum humidum; Syph. populo-squamosum: Syph. populo-squamosum; Hydroa pemphigus iris. No. 6. Eczema squamosum; Syph. squamosum circinatum; syph. tuberculosum circinatum; Syph. squamosum gyratum; Syph. squamosum circinatum; Syph. tuberculosum. [New York; E. B. Treat, No. 757 Broadway. Price $2.00 per part.]

Cases treated by the Lister Method, reported to the Portland Clinical Society, 11th of Sept. 1880. By Frederick Henry Gerrish, M. D. [Portland, Me., 1880.]

Notes on any Case of Extirpation of the Larynx. A reply to Dr. Glasgow's article on the same subject by T. Lange, M. D. [New York, 1881.]

Myopia (commonly called near-sightedness) in its various Phases. By Julian J. Chisolm, M. D. [Revised from Sept. No. 1880, *Virginia Medical Monthly.*]

Extensive Scalding from Prolonged Exposure to Steam at a High Temperature by Norman H. Chapman, M. D., M. S. [Extract from the *Am. Journ. Medical Sciences.*, Jan., 1881.]

The Asylums of Europe. By Geo. Beard, A. M., M. D. [Reprinted from the *Boston Med. and Surg. Journal* of Dec. 23. 1880.]

Laparatomy and Colotomy, with formation of Artificial Anus for Obstruction of Intestines by Wm. A. Byrd, M. D. [Extracted from Trans. American Med. Ass. 1880.]

Extirpation of Rectum without destroying the Sphincter, Arni Muscles by Wm. A. Byrd, M. D. [Reprinted from the *Med. and Surg. Reporter*, Dec. 11th, 1880.]

A Treatise on the Principles and Practice of Medicine. Designed for the use of practitioners and students of medicine. By Austin Flint, M. D. Fifth Edition. Revised and largely re-written. 8 vo., pp. 1150. [Philadelphia: Henry C. Lea's Son & Co. 1881. St. Louis: Hugh R. Hildreth Printing Co.]

A Manual for the Practice of Surgery. By Thomas Bryant, F. R. C. S. Third American from the third revised and enlarged English Edition. Edited and enlarged for the use of the American student and practitioner. By John B. Roberts, A. M. M. D., with 735 ills. 8 vo., pp. 1005. [Philadelphia: Henry C. Lea's Son & Co. 1881. St. Louis: Hugh R. Hildreth Printing Co.]

An Elementary Treatise on Practical Chemistry and Qualitative Inorganic Analysis. Specially adapted for use in the laboratories of colleges and schools, and by beginners. By Frank Clows, D. Sc. Lond., with illustrations from the third English Edition. 12 mo., pp. 372. [Philadelphia: Henry C. Lea's Son & Co. 1881. St. Louis: Hugh R. Hildreth Printing Company.]

The Transactions of the American Medical Association. Instituted 1847. Vol. xxxi. 8 vo., pp. 1153. List of Members, etc., pp. 131. [Philadelphia: Printed for the Association by Collins. 1880.]

Report of the Albany Hospital for the Two Years Ending January 31, 1880, with an account of the Hospital Bazar, 8 vo., pp. 111. [Albany, N. Y. 1880.]

The Development of the Osseous Callus in Fractures of the Bones of Man and Animals. By Henry O. Marcy, A. M., M. D. [Reprinted from the Transactions of the American Medical Association. 1880.]

Address in Medical Jurisprudence, Psychology, State Medicine, etc. By John F. Hibbard, M. D. [Extracted from Trans. Am. Med. Ass. 1880.]

A Partial Report from the Committee on Gynecology. The Relative Value of the Symptoms of Neurasthenia, as such, and the Remote Symptoms of Uterine Disease. By Lucinda H. Corr, M. D. [Reprinted from the Trans. Ill. State Med. Soc., for 1880.]

Cæsarean Section, with Removal of Uterus and Ovaries After the Porro-Müller Method. By Elliott Richardson, M. D. [Extracted from *Am. Jour. of the Med. Sciences*, Jan., 1881.

Investigation by the Commissioners on Charitable Institutions of the City of St. Louis relative to certain statements concerning the Management of the Insane Asylum, October 26, 1880, as reported in an article published in the *Globe-Democrat*, Oct. 23, 1880. [St. Louis. 1881.]

Stricture of the Trachea. By Herman Mynter, M. D.

Anæmia in Infancy and Early Childhood. By A. Jacobi, M. D. [Reprinted from the *Archives of Medicine*, Feb., 1881.]

The Bacteria. By Dr. Antoine Magnin. Translated by George M. Sternberg, M. D. 8 vo., pp. 227. [Boston: Little, Brown & Co. 1880. St. Louis: St. Louis Book and News Co.]

Medical Diagnosis, with Special Reference to Practical Medicine. A guide to the knowledge and discrimination of Diseases. By J. M. Da Costa, M. D. Illus. with engravings on wood. Fifth Edition. Revised. 8 vo., pp. 924. [Philadelphia: J. B. Lippincott & Co. 1881. St. Louis: St. Louis Book and News Company.]

Minor Surgical Gynecology. A Manual of Uterine Diagnosis and the Lesser Technicalities of Gynecological Practice, for the use of the advanced student and general practitioner. By Paul F. Mundé, M. D., with 300 illustrations. (No. XII. of Wood's Library of Standard Medical Authors.) 8 vo., pp. 381. [New York: Wm. Wood & Co. 1880. St. Louis: E. C. Pease, 514 Olive street.]

Fifty-fourth Annual Report of the Inspectors of the State Penitentiary for the Western District of Pennsylvania, for the year 1880. [Pittsburg. 1881.]

News Items.

Dr. G. P. Hackenberg, of Austin, Texas, is engaged in the compilation of a "Consultation Prescription Book." To give thoroughness to his work he respectfully solicits from practitioners information of:

1st. Any remedial agent of value not generally recognized in medical works.

2d. Their experience in the use of formulary preparations of value, that have been of late years placed in the medical market by several of our leading laboratories.

3d. The contribution of favorite prescriptions, not necessarily original, but authenticated and of approved efficiency.

4th. And their individual opinion of the therapeutic value of the leading medicines, relatively considered from 1 to 100.

Any aid of valuable import, either through recent publications or direct from practitioners will be thankfully received and duly accredited in the work itself.

The Jan. 1st 1880, number of the *Denver Tribune* consists of 32 pages closely printed matter chiefly relative to Colorado. It contains all the information that could be derived on the subject, besides the regular news. This extra number was sold for ten cents, and shows the great advance made by the exponents of "the art preservative."

We have also received a copy of *The Great West* Christmas number, containing 32 pages and consisting a great deal in information on the industries of Colorado. It is published in Denver, by M. M. Pomeroy, who formerly called himself "Brick," when he published the "LaCrosse Democrat,"

The *Annals of the Anatomical and Surgical Society* has been changed to a monthly, and its name to *Annals of Anatomy and Surgery*. Drs. Pilcher and Fowler being editors. It is well gotten up and deserves hearty support from the profession at large, for whose benefit it is intended.

ST. LOUIS MEDICAL SOCIETY.

At the annual meeting of the St. Louis Medical Society, the following were elected officers for the ensuing year: H. H. Mudd, M. D., President; R. S. Anderson, M. D., Vice President; A. H. Ohmann-Dumesnil, M. D., Recording Secretary; M. H. Post, M. D., Corresponding Secretary; W. E. Fishel, M. D., Treasurer. At the subsequent meeting the following were named for the standing committees: Ethics—Chas. E. Briggs, M. D., Geo. F Gill, M. D., and Chas. W Stevens, M. D. Publica-

tion and Debate—G. Hurt, M. D., J. R. Lemen, M. D., and Justin Steer, M. D. Elections—Wm. Johnston, M. D., Le Grand Atwood, M. D., and T. F. Prewitt, M. D. Executive—Wm. L. Barret, M. D., Wm. Porter, M. D., and S. T. Newman, M. D. Library—W. E. Fishel, M. D., E. M. Nelson, M. D., and M. H. Post, M. D. The society continues in good working condition and it is hoped that during the coming year we will have many interesting contributions to medicine.

Walsh's *Retrospect* has appeared in a new and neater form. One of its features is the original department, containing original articles, book reviews and editorials. The only possible objection we could make in regard to it, is the extreme smallness of the type employed.

The *American Medical Bi-Weekly*, formerly published in Louisville, Ky., and which had nearly reached the close of the eleventh volume when the severe and protracted illness of the Editor compelled its temporary discontinuance, is now, on his entire recovery, returned to its position among the Medical Journals of this country. The Editor, Dr. E. S. Gaillard having made his home in New York, the Bi-Weekly is now published there. The first number of volume twelve has been received. It is now a double column journal, larger than the old Bi-Weekly, and is published at one third its former price. Its address is Box 1124, New York City.

The Accuracy of Clinical Thermometers

A card to the medical profession from the Winchester observatory of Yale college:

The competition of business, coupled with the entire absence up to this time of any large observatory in this country paying special attention to thermometry, to which authoritative appeacould be made, has so affected the manufacture of thermometers for medical purposes, that it seems neccessary to issue a card briefly indicating the errors commonly found to exist, and to explain why, in this case, the representations of the dealers may be at fault through the want of proper understanding of the subtile errors to which medical thermometers are liable.

Too great a desire to economize time, good material, and skilled labor has led, in the making of thermometers, to the fol-

lowing faults: 1. The graduation is sometimes started from one point of the scale, near the normal, and the size of the capillary tube is guessed at. No upper point being fixed by the maker, the higher graduations may be erroneous to the extent of several degrees. 2. Too much air separating the index from the column of mercury causes the index to rise with a jerky motion; air above the index forces the index down when the thermometer is taken away from the body. In some thermometers errors from this cause amount to two degrees at high temperatures. 3. New thermometers increase their readings rapidily during the first months after manufacture, so that instruments which were right when made may change their indications as much as two degrees within a year.

It will be seen that these errors are not such as the dealers can readily detect. Even in the case where a dealer is supplied with a standard thermometer with which comparison could be made, it is a difficult matter to discover the errors of the standard itself, and the unsupported representation of dealers and druggists therefore, though made in perfectly good faith, cannot from the nature of the case, afford the physicians satisfactory evidence that any thermometer he may buy is not affected with errors, which in many instances under our observation have amounted to several degrees.

Following the example of the Royal Society's Observatory at Kew, at which during the past year upwards of five thousand thermometers were examined, this observatory has established a department to which any physician or other person may send thermometers by mail or express, and upon payment of a small fee receive certificates of their exact errors. The facilities are such that there is no good reason why physicians should not buy their new thermometers furhished with the Yale certificate by the dealers; in those cases where no certificate is furnished the uncertainty may amount to two degrees. It should be remembered that thermometers which the physicians has had in his possession for many months are certain to have had the requisite seasoning, and therefore an old thermometer with a recent certificate is more valuable than a new one, or one about whose age there is a doubt.

The observatory has been called upon within the last three months to certify about seven hundred thermometers from various parts of the country; the results of this work have demonstrated the gross inaccuracy of the cheaper clinical thermometers as commonly sold and seem to render expedient the publication of this card calling the attention of physicians to these errors and the great difficulty of detecting them except with the appliances of an observatory devoted to this work.

NEW HAVEN, CONN., February 1, 1881.

LEONARD WALDO, Astronomer in charge.

The Illinois State Board of Health held its annual meeting at Springfield Ill., and is now engaged in preparing the second edition of the *Register of Physicians and Midwives*, and will be obliged to the profession, it they will call attention to mistakes and changes of location or omissions. Secretaries of medical societies are also requested to send the roster of their officers, and the names, age and cause of death of any medical men who have died within the last year. The board is anxious to make the *Register* as perfect as possible. It is also important to every one that his or her record be correct.

INTERNATIONAL CONGRESS FOR THE ABOLITION OF STATE REGULATION OF PROSTITUTION.—At a meeting of this Congress in Genoa recently, the following resolutions were adopted: 1st, everything relating to prostitution must be made subject to the Common Law of each country; 2d, all legal guarantees of personal liberty must be equal for the two sexes; 3d, the law must not provide or tolerate any official registration of prostitutes, or any official recognition of prostitution as the status of a social class; 4th, the law must not sanction or tolerate any violation of the rights possessed by every woman over her own person; 5th, the law must not allow imprisonment, except upon a judicial sentence passed in open court, upon evidence on oath or affirmation of a legally defined offence, and after full opportunity of defence for the accused; 6th, all policemen, when performing executive duties, must be in uniform; 7th, all officers of the law must be fully responsible for all their acts before the ordinary courts.

And the Congress rejects every regulation of prostitution, whether established by the State, by the Commune, or by any other authority.—[*The Medical Record.*

THE INVENTION OF SPECTACLES.—Dr. Gori recently presented to the Institute of France a printed bill of D. Chorez, spectacle-maker of Paris, dated 1625, in which he describes binocular spectacles, of which he offers a pair to the king. Hitherto, the invention of binocular spectacles has been attributed to Antoine-Marie Sbhyrle, a Bohemian capuchin friar, born in 1597, and who died at Ravenna in 1660.—[*Medical Gazette.*

ANÆSTHETICS IN 1651.—In a recent work, entitled "Histoire de la Médecine a Troyes," Dr. Guichet relates that the College of Physicians of that town brought an action against a certain

Nicolas Bailli for administering internal remedies to his patients and *putting them to sleep*. In defence Bailli declared that having observed that in great operations, amputations, incisions, actual potential cauterizations, many patients slipped through his hands for want of sleep, he had studied the secrets of nature, and had at last found a cordial, or marvelous essence, which put them to sleep softly, and appeased their sensibility to pain.—[*Medical Gazette.*

Section of Ophthalmology, Otology and Laryngology, American Medical Association.—All special practitioners in these departments holding membership in any regular organized medical society recognized by the American Medical Association are codially invited to attend the approaching meeting in Richmond, Virginia, the first Tuesday in May, 1881. The growth of this section has been somewhat remarkable. It is now one of the most important sections in the American Medical Association, and it is hoped the next meeting will be largely attended. The only true line of progress in specialism is through the regularly organized body of the medical profession. Specialties in medicine are accomplishments, and no distinct professions. It is just as important for specialists to observe the code of medical ethics as it is for general practitioners to do so, and however much may be accomplished by isolated associations of specialists in medicine vastly more good will accrue from the division of the profession into specialties, all working harmoniously together in one organization, as is now being done in the American Medical Association.

Persons desiring to contribute papers to the next meeting of the section will please forward their names and the titles of the papers they desire to present to Swan M. Burnett, M. D., Secretary of Section, Washington, D. C.

Dudley S. Reynolds, M. D.
Chairman, Louisville, Ky.

Crystals of Hæmine.—F. Högyes has examined crystals from the blood of men, oxen, swine, dogs, cats, rabbits, guinea pigs, mice, pole cats, poultry, pigeons, geese, ducks, *Rana esculenta* and *temporaria*. All have one only. They belong to the monoclinar or triclinar system, probably the former.—[*Scientific American.*

METEOROLOGICAL OBSERVATIONS.

By A. WISLIZENUS, M. D.

The following observations of daily temperature in St. Louis are made with a MAXIMUM and MINIMUM thermometer (of Green, N. Y.). The daily minimum occurs generally in night, the maximum at p. m. The monthly mean of the daily minima and maxima added and divided by two, gives quite a reliable mean of the monthly temperature.

THERMOMETER, FAHRENHEIT—JAN., 1881.

Day of Month.	Minimum.	Maximum.	Day of Month.	Minimum.	Maximum.
1	10.5	32.0	18	24.0	30 0
2	18.5	38.0	19	28 0	31.0
3	16.5	21 0	20	30.5	35.0
4	16.0	23.5	21	29.0	31.5
5	18.0	30.0	22	23.5	27.0
6	18.0	31 5	23	16.0	28.5
7	5.5	12.0	24	21.0	26.0
8	7.0	20.0	25	23.0	29.0
9	9.0	15.0	26	15 5	26.0
10	—1 5	8.0	27	11.0	24.5
11	—1.5	27.0	28	7.5	26.0
12	19 0	40.0	29	25.5	44.5
13	18 0	42.5	30	38.9	**46.5**
14	—7 0	4.5	31	36.0	41.5
15	3.	28 0			
16	21 5	32.0	Means	16.5	28.3
17	13.5	27.0	Mean	22 4	

Quantity of rain and snow, 0 45 inches.

MORTALITY REPORT.---CITY OF ST. LOUIS.

FROM DEC. 25, 1880, TO JAN. 22, 1881, INCLUSIVE.

Leucocythemia	2	Childbirth	0
Scarlatina	10	Inanition, Want of	
Pyæmia & Septicæ	0	Breast Milk, etc	16
Erysipelas	9	Alcoholism	9
Diphtheria	10	Rheumat'm & Gout	5
Membran's Croup	8	Cancer and Malig-	
Whooping Cough	4	nant Tumor	8
Ovarian tumor	1	Phthisis & Tuber-	
Measles	4	culosis, Pulmon.	81
Typhoid Fever	7	Bronchitis	28
Cerebro-spinal Fe.	2	Senility	21
Remittent, Inter-		Pneumonia	75
mittent, Typho-		Heart Diseases	19
Malarial, Con-		Other Diseases of	
gestive & Simple		Respir'y Organs	19
Contin'd Fevers	16	Metro-Peritonitis	0
Puerperal Fevers	2	Marasmus — Tabes	
Diarrhœal Dis'as	9	Mesenterica and	
Other Zymotic Dis-		Scrofula	12
eases	1	Tonsilitis	
		Convulsions & Tris-	
		mus Neonatorum	27
		Hydrocephalus and	
		Fub. Meningitis	3
		Meningitis & En-	
		cephalitis	12
		Other Diseases of	
		the Brain and	
		Nervous System	17
		Cirrhosis of Liver	
		and Hepatitis	6
		Enteritis, Gastro-	
		Enteritis, Peri-	
		tonit, and Gas-	
		tritis	21
		Bright's Disease	
		and Nephritis	10
		Other Diseases of	
		Urinary Organs	0
		Diabetes	1
		Aneurism	0
		Apoplexy	10
		Dis. fem. gen. org.	0
		Surgical Operation	1
		Premature Birth	0
		Deaths by Suicide	5
		Deaths by Accid't	21
		Deaths by Homicide	1
		Congen Debil'ty	25
		Total Deaths from	
		all Causes	544
		Total Zymotic Dis-	
		eases	94
		Total Constitution-	
		al Diseases	101
		Total Local Dis-	
		eases	252
		Total Develop'tal	
		Diseases	4
		Deaths by Viol'ce	28

CHAS. W. FRANCIS, *Health Commissioner.*

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We are free to confess our belief that there is no substitute superior to Quinine, that is to say, that there is no substance equally as potent and reliable now discovered, that will replace this valuable and well tried remedy; but there has been an increasing demand for a cheaper substance than Quinine, and in accordance with this requirement we have made the nearest approach to what is desired, in the discovery of the new Antiperiodic, Quinamine.

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100 Pills, 2 grs. $1.35 100 Pills, 3 grs. $195.

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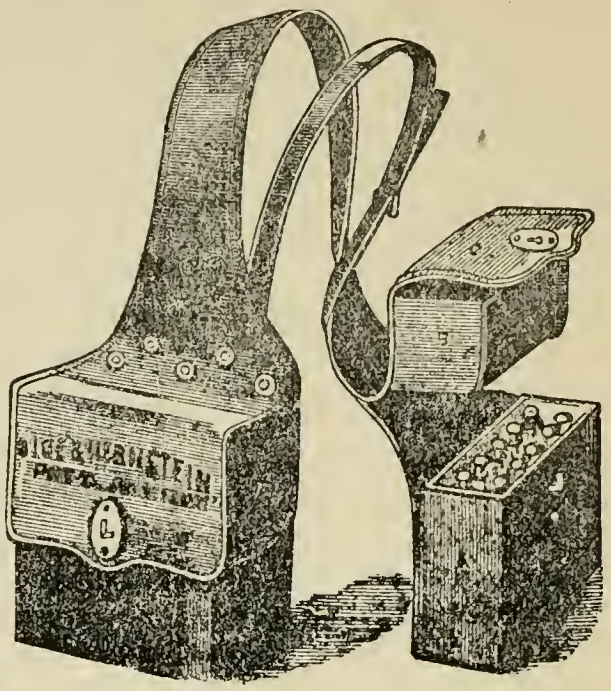

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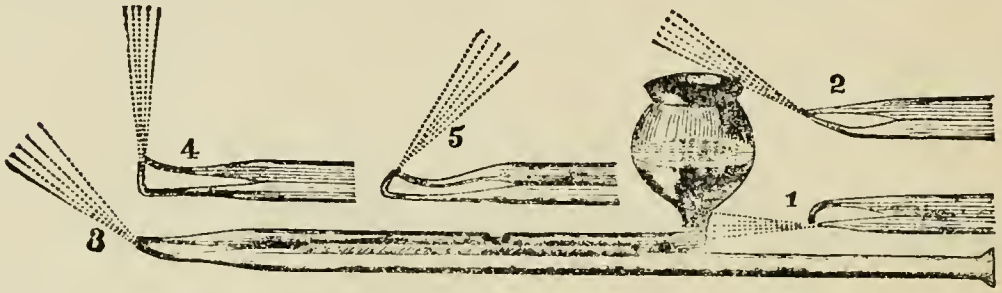

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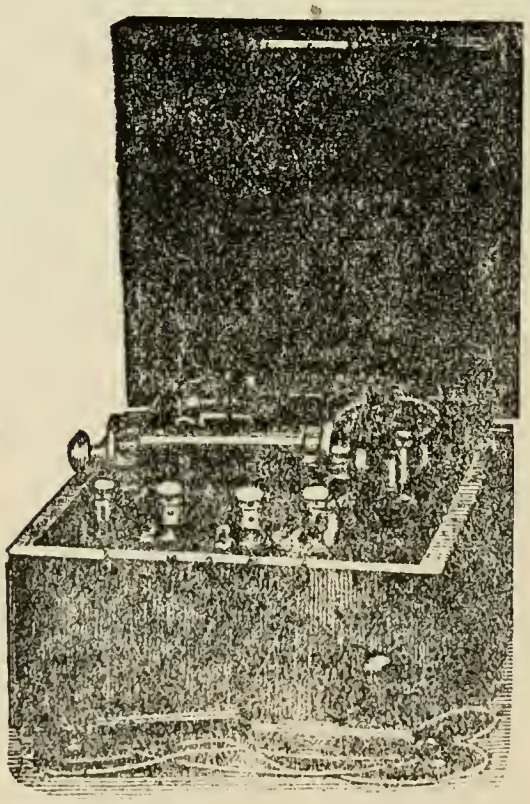

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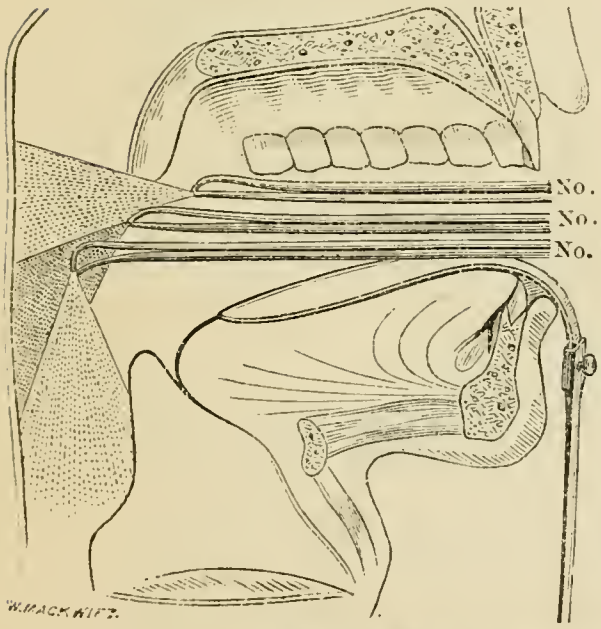

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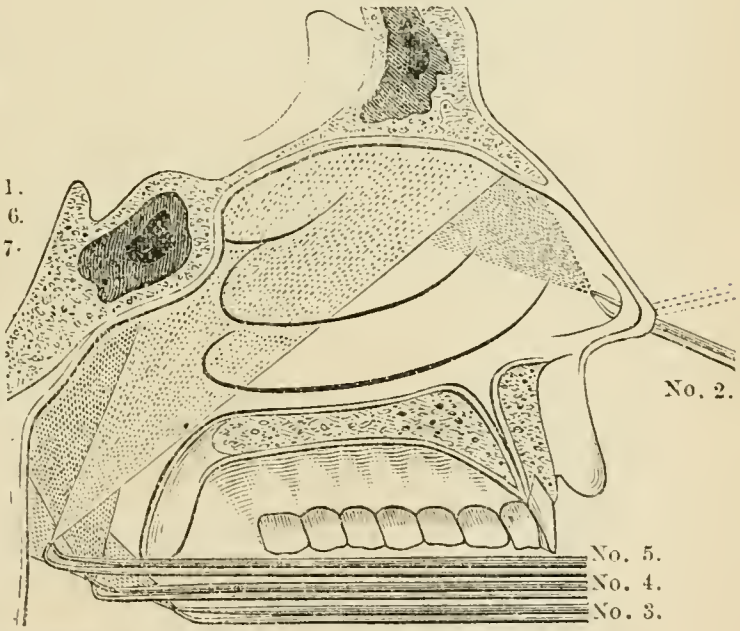

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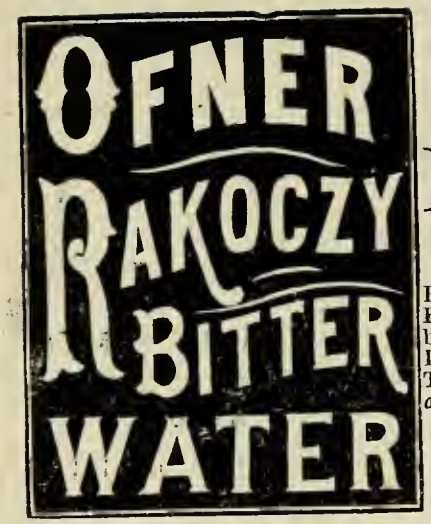

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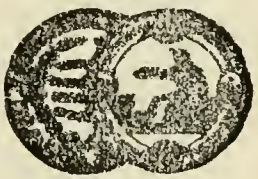

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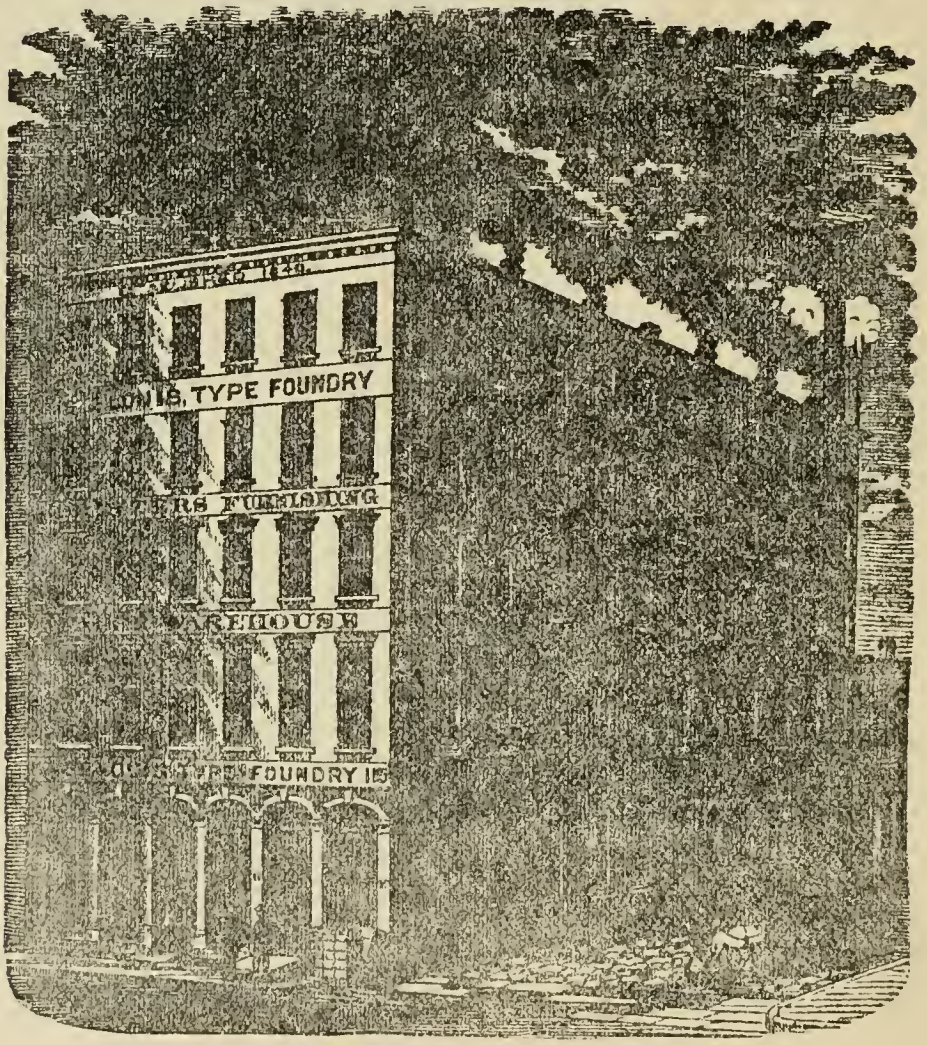

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A POSITIVE AND PERMANENT AID IN THE

Cure of all Diseases and Derangements of the Womb,

Including Inflammation, Ulceration, Weakness, Prolapsus, Retroversion, Anteversion, and Retroflextion; also Constipation and Affections of the Bladder.

This Support is the result of careful observation and experience, gained in many years of actual practice in the diseases of females, and is the best Support ever designed for the relief and aid of the above-named diseases. It is constructed on purely anatomical principles, and has been pronounced by every lady who has worn it to be the best and only reliable comfortable support they have seen or worn.

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3d. It carries the Womb up into its proper position, thus removing all strain upon the broad and round ligaments.

4th. By keeping the Womb in its proper position, all pressure upon, and irritation of the vaginal walls is relieved, and inflammation of the parts thereby prevented.

5th. Dr. Livingston's Abdominal Support is so constructed, by the insertion of flexible bone to strengthen and give it shape, that it fits easily and smoothly over the hips and spinal column, never cutting into the body or rolling up on the edges, pressure being evenly distributed over every part.

6th. The bands extending from the sides around and over the back is wider than any other, and cut to exactly fit the body.

7th. The straps that pass over the nates and between the limbs do not chafe or produce any heat to the parts.

8th. Dr. Livingston's Abdominal Support, by preventing all pressure of the Womb upon the Bladder and Rectum, stops that constant desire to pass water, which so many Ladies find a source of much discomfort, and also prevents constipation and the long train of ills which frequently result therefrom.

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In applying the Support, have front pads as low down as possible, and the lower strap as tight as patient can, with comfort, wear it. The upper one brought up close to the body without pressure.

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Sizes run from No. 3 to No. 8, commencing at 28 inches, and rises 4 inches with each number. In ordering, give measure round hips.

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TONGA.

The Fijian Remedy for Neuralgia.

This remedy has been used for several centuries by the aborigines of the Fiji Islands, though introduced to the notice of the profession in England only about a year ago.

The success attending its use in the hands of Drs. Sidney Ringer and Wm. Murrell, of London, England, induced us to dispatch an agent to the Fiji Islands for the collection of a quantity of this valuable drug. Heretofore the secret of its source had been jealously guarded by the Fiji chiefs, the knowledge of its composition being handed down as an heirloom from one generation to another. Through Mr. Ryder, a resident from Fiji, a specimen of the remedy was first brought to England, with the statement that he received it from a European who had married a chief's daughter and had learned the secret from his father-in-law.

Tonga, as prepared by the Fijians, is a compound of several plants, and occurs in the form of small loose bundles, the remedy being enveloped in a wrapper of the inner bark of the cocoanut tree.

The natives administer it in the form of an infusion, but it has been found that alcohol much more thoroughly extracts its active principles.

Drs. Ringer and Murrell base their report of the use of the drug on a sufficient number of cases, and C. Bader, ophthalmic surgeon to Guy's Hospital, says: "The results obtained by Drs. Ringer and Murrell fully coincide with mine. I have notes of cures of brain and kidney disease in which Tonga alone succeeded in removing pain. All cases of neuralgia (supra- and infra-orbital branches of the fifth nerve) with sweiling of the temporal veins during the attack were benefitted."

Reports from Sidney, Australia, show that Tonga has also been successfully employed as a remedy for neuralgia, by the profession of that country.

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LIPPIA MEXICANA.

A NEW EXPECTORANT.

This new Mexican remedy is introduced to the medical profession of this country on the authority of Dr. A. H. Saxton, Baltimore, Md., who has communicated the results of his experience in its use in an article in the January, 1881, number of the "Therapeutic Gazette."

The demulcent and expectorant properties claimed for the drug by Dr. Saxton, are such as must commend it to the careful attention of the profession, and especially so during the season of catarrhal affections of the respiratory passages. A remedy which combines demulcent with expectorant properties, and at the same time does not nauseate, must meet with favor. The cases reported by Dr. Saxton would also seem to show the drug to be possessed of an alterative influence in the respiratory mucous membrane which must enhance its value in those chronic affections so often rebellious to treatment.

We prepare a tincture of Lippia Mexicana and will be pleased to furnish a reprint of Dr. Saxton's article, on application.

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